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MORBIDITY AND MORTALITY WEEKLY REPORT

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Notice to Readers

CDC was closed because of inclement weather on January 13, 14, and 15, 1982. It was therefore not possible to publish Vol. 31, No. 1, on the scheduled date of January 15, 1982. Thus, material included in this issue (Vol. 31, Nos. 1 and 2, January 22, 1982) comprises reports scheduled for January 15 and 22, as well as tables reflecting information received by CDC for reporting weeks 1 and 2 of calendar year 1982.

Epidemiologic Notes and Reports

Global Distribution of Penicillinase-Producing *Neisseria gonorrhoeae* (PPNG)

Strains of penicillinase(β-lactamase)-producing *Neisseria gonorrhoeae* (PPNG) continue to spread throughout the world. The number of countries where PPNG has been identified through May 1981 (Table 1) appears to be limited only by the capacity of local laboratory services to isolate and test for these strains. Many countries with good surveillance systems have observed 2- to 6-fold increases in the number of such cases reported within the last 18-24 months.

Gonococcal strains partially resistant to penicillin and other antibiotics have long been recognized, and infections caused by them have been treated with dose increases or with alternative antibiotics. However, many areas of the world now have a high proportion of patients for whom penicillin therapy is not effective because of gonococcal strains with plasmid-mediated resistance. Alternative regimens for effective treatment may be difficult to identify and may result in increased treatment costs to the point where many governments or patients can no longer afford such treatment. Because alternative therapies are expensive, less effective treatments such as penicillins continue to be used. This further selects for drug resistance and extends the infectious period for patients. Thus, gonorrhea transmission may be expected to continue, and the proportion of infected patients who develop complications may be expected to rise.

Reported by Bacterial and Venereal Infections Unit, World Health Organization in PAHO Epidemiologic Bulletin 1981;2:8-9, Venereal Disease Control Div, Center for Prevention Svcs, CDC.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

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PPNG – Continued

TABLE 1. Locations with identified strains of β-lactamase-producing *Neisseria gonorrhoeae* through May 1981*

Africa	Americas	East Asia	Europe	South East Asia
Morocco	Canada	Philippines	France	Indonesia
Ghana	United States	Hong Kong	Belgium	Singapore
Mali	Mexico	Taiwan	Netherlands	Malaysia
Nigeria	Panama	Guam	United Kingdom	Thailand
Central African Republic	Argentina	Japan	West Germany	India
Gabon	Colombia	Republic of Korea	Denmark	Sri Lanka
Zaire		New Zealand	Poland	
Madagascar		New Hebrides	Switzerland	
Zambia		Australia	Sweden	
Senegal			Norway	
			Finland	

*Information obtained through WHO Epidemiological Surveillance System; adapted from PAHO Epidemiologic Bulletin.

Editorial Note: The number of cases of PPNG infection, reported in the United States increased from 328 in 1979 to 1,099 in 1980 (*1*) and to 1,910 in the first 9 months of 1981 (*2*). This trend apparently resulted from increases in numbers of cases of imported disease (mainly from the Philippines, Thailand, and the Republic of Korea) and from sustained domestic transmission in major metropolitan areas (particularly New York City, Miami, and Los Angeles). Importation of disease and subsequent transmission within the United States can be expected to continue. However, the effect of such continuing importation can be minimized by more widespread adherence to the use of 2 g of spectinomycin for initial treatment of uncomplicated, anogenital gonorrhea in patients who acquired the disease in countries with areas of high PPNG prevalence (*3*).

In some areas of the United States, intensified efforts have been successful in controlling the infection even after a period of sustained domestic transmission. In Washington state, while the proportion of imported cases increased from 15% in 1980 to 41% in the first 9 months of 1981, the total number of PPNG cases decreased from 96 to 26 in the same periods. In Los Angeles, the number of PPNG cases averaged 49 per month between January and July 1981 while the control effort was being developed; then for the months of August through November, PPNG cases decreased to 33, 33, 11, and 17, respectively. Miami, which had a peak of 61 cases in August, reported 49, 26, and 13 in September, October, and November, respectively.

Continued efforts to control PPNG transmission in this country must include testing of all gonococcal isolates for penicillinase production; prompt identification of sexual partners of all PPNG patients; screening of all groups considered to be at high risk of PPNG infection; and treatment of all the following with 2 g of spectinomycin: all PPNG patients and their sexual partners; patients who acquired gonorrhea in countries with high PPNG prevalence; and all patients for whom penicillin, ampicillin, amoxicillin, or tetracycline is not effective treatment for gonorrhea.

Evaluation of control strategies in the United States will continue. At the same time, operational research will be essential in countries with high PPNG prevalence to identify effective, feasible control strategies; to limit the adverse health effects of PPNG on people in these countries; and to reduce international transmission of PPNG.

References

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PPNG — Continued

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2. CDC. Penicillinase-producing *Neisseria gonorrhoeae* surveillance. Atlanta: Venereal Disease Control Div, CDC, 1981.
3. CDC. Penicillinase-producing *Neisseria gonorrhoeae*—New Mexico, California. MMWR 1980;29: 381-2.

A Foodborne Outbreak of Streptococcal Pharyngitis — Portland, Oregon

A foodborne outbreak of streptococcal pharyngitis occurred in association with a meeting held in a Portland, Oregon, hotel on May 7-9, 1981. Attending the meeting were 595 medical technologists and microbiologists from Oregon, Washington, Alaska, and California, as well as 175 exhibitors and 50 guest speakers. An estimated 300 persons were ill.

Beginning May 11, the epidemiology sections of the Multnomah County Health Officer Division and the Oregon State Health Division received calls from persons who had attended the meeting and were complaining of sore throats. Some reported having positive throat cultures for β-hemolytic group A streptococci. A foodborne source was suspected because of the high attack rate suggested by these telephone calls.

Equipment from the banquet kitchen, which had separate facilities and staff from the kitchen serving the general public, was inspected and met all hygienic standards. Personnel working in the banquet kitchen were examined briefly on May 12 for inflamed throats, enlarged cervical lymph nodes, and lesions on the hands and arms. Interviews with staff members and throat and skin cultures from the same group revealed that 5 of 10 employees who had been working had infected throats and/or hand lesions. Of 10 throat cultures, 4 were positive for β-hemolytic group A streptococci; of 5 cultures of skin lesions, 3 were positive for group A streptococci.

A questionnaire was prepared to determine symptoms, throat-culture results, food-consumption history, and meeting session(s) and meals attended by conference participants. Investigators were able to contact and interview 156 (26%) persons from a 30% systematic sample.

A case was defined as illness consisting of either sore throat and enlarged cervical lymph nodes, or 1 of those symptoms plus a throat culture positive for β-hemolytic group A streptococci, with illness beginning in the period May 7-13. Of 156 persons interviewed, 60 (38%) met the case definition. Onset of illness ranged from noon on May 8 to 8 AM on May 12 (Figure 1); 32 of the 60 persons became ill on May 9 between 8 AM and 4 PM.

Most persons involved in this outbreak had not had contact with each other before the meeting. However, during the conference, there were 8 group meals or gatherings involving food. The same food handlers prepared all food, which was apportioned into individual servings in the preparation area. A comparison of attack rates associated with individual meals showed that attendance at certain meals was apparently associated with becoming ill (Table 2).

Illness was associated with attendance at either of 2 social functions: hors d'oeuvres on Thursday afternoon or lunch on Friday (Table 2). The relative risk of becoming ill was greatest, however, for individuals present at lunch on Friday, suggesting a mean incubation period of 24-30 hours (Figure 1). No specific food could be identified as the vehicle of infection because most participants apparently ate portions of most of the food items offered. Foods served at lunch on Friday included tuna, chicken, ham, and carrot salads; the Thursday hors

Streptococcal Pharyngitis — Continued

d'oeuvres included potato salad and several cold canapés. No food from either meal was available for testing.

Streptococcal isolates from 26 participants and 5 food handlers were forwarded from 4 laboratories in Oregon to CDC for T and M typing. Isolates from all 31 persons were identical (T type 9, M negative, SOR positive).

Because these findings indicated that all conference participants may have been exposed to streptococci, persons who attended the meeting were notified of this possible exposure by the organizing association. Persons with compatible symptoms were advised to seek medical care. All patients whose treatment regimen was known were given oral penicillin with the ex-

FIGURE 1. Cases of streptococcal pharyngitis, by onset, Portland, Oregon, May 1981

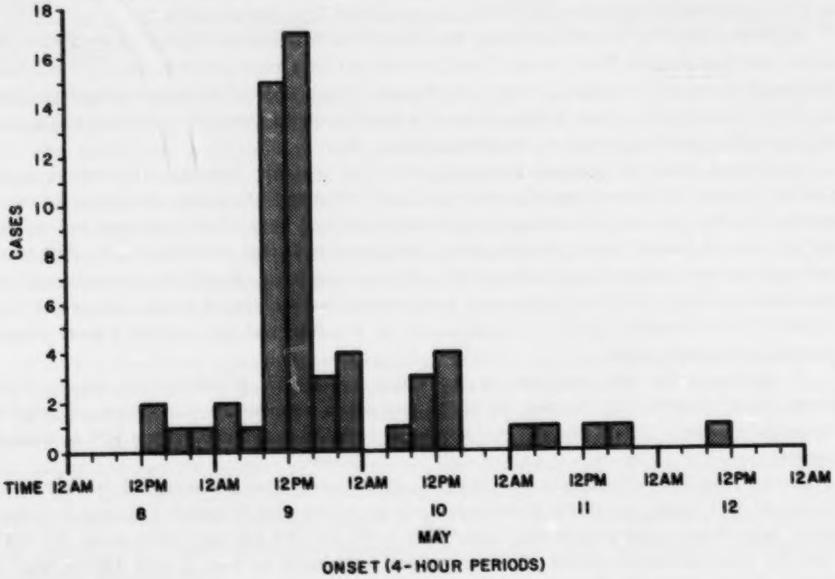

TABLE 2. Meal-specific attack rates, Portland, Oregon, May 1981

	Number of persons who ate specified meal				Number of persons who did not eat specified meal				
Meal	Ill	Not Ill	Total	%Ill	Ill	Not Ill	Total	%Ill	X^2
Thursday									
Lunch	26	30	56	46	34	56	90	38	1.07
Hors d'oeuvres	21	13	34	62	39	85	122	32	22.75
Friday									
Lunch	51	21	72	70	10	74	84	12	57.31
Saturday									
Breakfast	12	19	31	39	48	77	125	38	—
Lunch	26	38	64	41	34	58	92	37	0.11

Streptococcal Pharyngitis — Continued

ception of 1, who received erythromycin because of penicillin allergy. Food handlers given an antibiotic were allowed to return to work 48 hours after beginning treatment. Representatives of other groups that had banquets at the hotel during the same week were contacted, but no illness was reported among these groups.

Reported by T Dirks, J Furlong, RN, E Kaufman RS, J Kolden, CHN, C Schade, MD, Multnomah County Dept of Human Svcs, J Buehler, MD, University of Oregon Health Sciences Center, K Bennett, CLS, MT, ASCP, Association for Oregon Medical Technology, J Polder, RN, MPH, L Foster MD, Deputy State Epidemiologist, Oregon State Health Div; Special Pathogens Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Since pasteurization of dairy products and adequate refrigeration of prepared foods have become commonplace, outbreaks of foodborne illness caused by group A streptococci have been infrequent. Between 1973 and 1980, only 2 such outbreaks were reported to CDC. In virtually every investigation where a single food item could be incriminated, contaminated eggs or salads (egg, potato, meat) were the vehicle of transmission (*1-4*). Faulty food-handling techniques, particularly storage of prepared foods at improper temperatures for prolonged periods of time, have been identified in most of these investigations. Although infected food handlers have been implicated or suspected as the primary source of infection, it has not been clear whether contamination took place by respiratory droplets or by direct hand contact with the food.

The outbreak described here fits the previously established pattern of foodborne outbreaks of streptococcal pharyngitis, with a high attack rate and a short incubation period (1-4 days) following exposure. Although no single food item could be implicated, attendance at either of 2 meals was strongly associated with the development of illness. These meals, like many of the others served to this group, included a variety of salads. The food handlers had a high rate of streptococcal infection, including 3 persons who had culture-positive hand lesions. It was not possible to determine a single route by which food had been contaminated in this outbreak, because both throat and skin lesion cultures were positive. Furthermore, it is unknown which of the culture-positive food handlers may have had a primary case and which had secondary cases. However, it seems likely that food preparation by workers with open, culture-positive hand lesions contributed to contamination of the food.

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Current Trends

Use of Continuous Subcutaneous Insulin Infusion Pumps — Georgia, Maine, and Nebraska

Continuous subcutaneous insulin infusion (CSII) pumps allow insulin to be administered at a continuous low level with additional amounts before meals or snacks in order to normalize blood glucose. These are portable open-loop devices which do not have glucose sensors. Re-

Insulin Infusion Pumps – Continued

sults of the first clinical trial of CSII pumps were published in 1978, and in the past year they have had increased use in the medical community.

Information concerning the utilization of CSII pumps has enabled estimates to be made of the number of these devices currently in community use. In December 1981, 5 pumps were used for persons in Maine (19/100,000 diabetics based on a national prevalence of diabetes of 2.3%), 14 (39/100,000 diabetics) in Nebraska, and 43 (92/100,000 diabetics) in Atlanta.

Physicians have provided additional information for 37 patients being treated in non-university-based practices in Atlanta. All but one of these patients had onset of diabetes prior to age 30, and all were insulin dependent. Twenty-two (59.5%) were male; 36 (97.3%) were white. Most (89.2%), all but 4, were in social classes 1 through 3 (Hollingshead index). Clinically, 28 had major complications of diabetes including nephropathy (10), retinopathy (2), and neuropathy (19). Most (30) were begun on pumps primarily for blood-sugar control—all but 3 as inpatients, with an average duration of hospitalization of 6.4 days. Thirty-three patients have remained on the pumps. Mechanical failure of the pumps was noted in 3 cases; none of the patients had serious clinical complications. Three additional patients had local abscesses or other localized reactions.

Reported by JG Black, MD, WW Davis, MD, DW DeBra, Jr, MD, PC Davidson, MD, HA Ferris, MD, TD Golden, MD, P Richardson, MN, VE Silverman, MD, CB Teutsch, MD, JM Wolff, MD, JA Wilber, MD, Georgia Dept of Human Resources, Atlanta; CA Hale, RD, FG McGinty, Dept of Human Svcs, Augusta, Maine;

(Continued on page 15)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		1st WEEK ENDING			CUMULATIVE, FIRST WEEK		
		January 9 1982	January 10 1981	MEDIAN 1977-1981	January 9 1982	January 10 1981	MEDIAN 1977-1981
Aseptic meningitis		83	69	54	83	69	54
Brucellosis		3	–	2	3	–	2
Encephalitis.	Primary (arthropod-borne & unspec.)	7	10	6	7	10	6
	Post-infectious	–	1	1	–	1	1
Gonorrhea:	Civilian	18,584	18,202	16,306	18,584	18,202	16,306
	Military	496	555	488	496	555	488
Hepatitis:	Type A	306	321	365	306	321	365
	Type B	240	272	233	240	272	233
	Non A, Non B	9	N	–	9	N	–
	Unspecified	129	152	124	129	152	124
Legionellosis		–	N	–	–	N	–
Leprosy		–	2	2	–	2	2
Malaria		7	19	8	7	19	8
Measles (rubeola)		6	15	118	6	15	118
Meningococcal infections:	Total	32	55	29	32	55	29
	Civilian	32	55	29	32	55	29
	Military	–	–	–	–	–	–
Mumps		42	60	132	42	60	132
Pertussis		10	8	10	10	8	10
Rubella(German measles)		16	29	54	16	29	54
Syphilis (Primary & Secondary):	Civilian	557	518	410	557	518	410
	Military	6	9	7	6	9	7
Tuberculosis		307	240	240	307	240	240
Tularemia		–	1	1	–	1	1
Typhoid fever		3	5	4	3	5	4
Typhus fever, tick-borne (RMSF)		3	3	1	3	3	1
Rabies, animal		71	74	44	71	74	44

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	–
Botulism (Calif. 5)	5	Paralytic	–
Cholera (Calif. 1 Imported)	1	Psittacosis (Calif. 4)	4
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus (Calif. 1)	1
Leptospirosis	–	Trichinosis (Nev. 1)	1
Plague	–	Typhus fever, flea-borne (endemic, murine)	–

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 9, 1982 and January 10, 1982 (1st week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	83	3	7	-	18,584	18,202	306	240	9	129	-	-
NEW ENGLAND	2	-	-	-	368	456	6	9	-	5	-	-
Maine	-	-	-	-	32	31	1	-	-	-	-	-
N.H.	-	-	-	-	13	26	1	1	-	-	-	-
Vt.	-	-	-	-	14	10	-	-	-	-	-	-
Mass.	2	-	-	-	106	192	2	2	-	9	-	-
R.I.	-	-	-	-	18	22	2	5	-	-	-	-
Conn.	-	-	-	-	185	175	-	1	-	-	-	-
MID. ATLANTIC	4	-	-	-	1,494	1,656	18	12	-	5	-	-
Upstate N.Y.	3	-	-	-	-	-	14	8	-	2	-	-
N.Y. City	-	-	-	-	950	775	4	4	-	2	-	-
N.J.	1	-	-	-	203	517	-	-	-	1	-	-
Pa.	-	-	-	-	341	364	-	-	-	-	-	-
E.N. CENTRAL	22	-	4	-	1,759	2,440	37	74	-	22	-	-
Ohio	-	-	-	-	347	427	-	-	-	-	-	-
Ind.	13	-	2	-	149	187	13	14	-	14	-	-
Ill.	2	-	-	-	225	695	1	41	-	-	-	-
Mich.	7	-	1	-	727	890	22	17	-	7	-	-
Wis.	-	-	1	-	311	241	1	2	-	1	-	-
W.N. CENTRAL	5	-	-	-	1,292	803	14	6	1	3	-	-
Minn.	1	-	-	-	256	80	5	2	1	2	-	-
Iowa	1	-	-	-	115	100	3	1	-	-	-	-
Mo.	1	-	-	-	580	345	2	2	-	1	-	-
N. Dak.	1	-	-	-	15	10	-	-	-	-	-	-
S. Dak.	1	-	-	-	27	31	2	-	-	-	-	-
Nebr.	-	-	-	-	22	94	2	1	-	-	-	-
Kans.	-	-	-	-	277	143	-	-	-	-	-	-
S. ATLANTIC	4	-	-	-	5,906	4,325	10	26	2	9	-	-
Del.	-	-	-	-	72	141	1	-	-	1	-	-
Md.	-	-	-	-	450	499	-	-	-	-	-	-
D.C.	-	-	-	-	186	277	1	1	-	-	-	-
Va.	2	-	-	-	339	339	3	5	-	1	-	-
W. Va.	-	-	-	-	32	62	1	3	2	2	-	-
N.C.	1	-	-	-	1,339	652	1	9	-	3	-	-
S.C.	-	-	-	-	302	439	3	8	-	2	-	-
Ga.	-	-	-	-	942	1,098	-	-	-	-	-	-
Fla.	1	-	-	-	2,244	818	-	-	-	-	-	-
E.S. CENTRAL	9	-	-	-	1,534	2,121	20	15	1	7	-	-
Ky.	-	-	-	-	119	273	8	4	-	1	-	-
Tenn.	8	-	-	-	482	603	10	7	1	3	-	-
Ala.	1	-	-	-	526	850	2	4	-	3	-	-
Miss.	-	-	-	-	407	395	-	-	-	-	-	-
W.S. CENTRAL	5	-	1	-	3,578	3,805	49	10	-	30	-	-
Ark.	-	-	-	-	456	240	-	-	-	-	-	-
La.	-	-	-	-	76	201	-	-	-	-	-	-
Okla.	-	-	-	-	246	255	-	-	-	1	-	-
Tex.	5	-	1	-	2,800	3,109	49	10	-	29	-	-
MOUNTAIN	3	-	-	-	253	657	48	8	3	5	-	-
Mont.	-	-	-	-	45	15	2	-	-	-	-	-
Idaho	-	-	-	-	10	25	1	1	-	-	-	-
Wyo.	-	-	-	-	32	41	1	-	-	-	-	-
Colo.	1	-	-	-	-	160	9	3	-	1	-	-
N. Mex.	-	-	-	-	46	79	9	-	-	-	-	-
Ariz.	-	-	-	-	-	171	13	-	1	2	-	-
Utah	2	-	-	-	25	33	9	2	1	2	-	-
Nev.	-	-	-	-	95	133	4	2	1	-	-	-
PACIFIC	29	3	2	-	2,400	1,939	104	80	2	39	-	-
Wash.	1	-	1	-	229	138	-	-	-	-	-	-
Oreg.	-	-	-	-	183	183	4	12	2	-	-	-
Calif.	24	3	1	-	1,862	1,521	99	60	-	39	-	-
Alaska	-	-	-	-	64	43	-	5	-	-	-	-
Hawaii	4	-	-	-	62	54	1	3	-	-	-	-
Guam	U	-	-	-	-	8	U	U	U	U	U	-
P.R.	U	-	-	-	-	45	U	U	U	U	U	-
V.I.	-	-	-	-	3	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	-	11	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 9, 1982 and January 10, 1981 (1st week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	7	7	6	6	15	32	32	42	42	10	16	16	29
NEW ENGLAND	–	–	1	1	1	5	5	6	6	1	–	–	9
Maine	–	–	–	–	–	–	–	1	1	–	–	–	7
N.H.	–	–	1	1	1	3	3	–	–	–	–	–	2
Vt.	–	–	–	–	–	1	1	–	–	–	–	–	–
Mass.	–	–	–	–	–	–	–	5	5	1	–	–	–
R.I.	–	–	–	–	–	1	1	–	–	–	–	–	–
Conn.	–	–	–	–	–	–	–	–	–	–	–	–	–
MID. ATLANTIC	–	–	1	1	6	5	5	–	–	–	1	1	8
Upstate N.Y.	–	–	1	1	1	–	–	–	–	–	1	1	2
N.Y. City	–	–	–	–	2	–	–	–	–	–	–	–	1
N.J.	–	–	–	–	–	5	5	–	–	–	–	–	5
Pa.	–	–	–	–	3	–	–	–	–	–	–	–	–
E.N. CENTRAL	–	–	1	1	–	1	1	10	10	3	–	–	2
Ohio	–	–	–	–	–	–	–	–	–	–	–	–	–
Ind.	–	–	1	1	–	–	–	2	2	–	–	–	1
Ill.	–	–	–	–	–	–	–	2	2	–	–	–	–
Mich.	–	–	–	–	–	1	1	5	5	2	–	–	–
Wis.	–	–	–	–	–	–	–	1	1	1	–	–	1
W.N. CENTRAL	–	–	–	–	–	1	1	4	4	–	1	1	1
Minn.	–	–	–	–	–	–	–	–	–	–	1	1	–
Iowa	–	–	–	–	–	–	–	–	–	–	–	–	–
Mo.	–	–	–	–	–	1	1	2	2	–	–	–	–
N. Dak.	–	–	–	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	–	–	–
Nebr.	–	–	–	–	–	–	–	–	–	–	–	–	–
Kans.	–	–	–	–	–	–	–	2	2	–	–	–	1
S. ATLANTIC	2	2	–	–	–	4	4	8	8	2	4	4	3
Del.	–	–	–	–	–	–	–	–	–	–	–	–	–
Md.	–	–	–	–	–	–	–	–	–	–	–	–	–
D.C.	–	–	–	–	–	–	–	–	–	–	–	–	–
Va.	1	1	–	–	–	1	1	1	1	–	4	4	–
W. Va.	–	–	–	–	–	–	–	6	6	1	–	–	2
N.C.	–	–	–	–	–	–	–	–	–	–	–	–	1
S.C.	1	1	–	–	–	2	2	1	1	1	–	–	–
Ga.	–	–	–	–	–	–	–	–	–	–	–	–	–
Fla.	–	–	–	–	–	1	1	–	–	–	–	–	–
E.S. CENTRAL	–	–	–	–	–	3	3	1	1	–	1	1	1
Ky.	–	–	–	–	–	–	–	1	1	–	1	1	1
Tenn.	–	–	–	–	–	1	1	–	–	–	–	–	–
Ala.	–	–	–	–	–	2	2	–	–	–	–	–	–
Miss.	–	–	–	–	–	–	–	–	–	–	–	–	–
W.S. CENTRAL	–	–	–	–	–	6	6	1	1	–	–	–	–
Ark.	–	–	–	–	–	–	–	–	–	–	–	–	–
La.	–	–	–	–	–	2	2	–	–	–	–	–	–
Okla.	–	–	–	–	–	–	–	–	–	–	–	–	–
Tex.	–	–	–	–	–	4	4	1	1	–	–	–	–
MOUNTAIN	–	–	–	–	4	3	3	3	3	1	1	1	–
Mont.	–	–	–	–	–	–	–	–	–	–	–	–	–
Idaho	–	–	–	–	–	–	–	1	1	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	1	1	–
Colo.	–	–	–	–	–	1	1	–	–	–	–	–	–
N. Mex.	–	–	–	–	–	1	1	–	–	–	–	–	–
Ariz.	–	–	–	–	–	–	–	1	1	1	–	–	–
Utah	–	–	–	–	–	1	1	1	1	–	–	–	–
Nev.	–	–	–	–	4	–	–	–	–	–	–	–	–
PACIFIC	5	5	3	3	4	4	4	9	9	3	8	8	5
Wash.	–	–	–	–	–	–	–	1	1	–	1	1	–
Oreg.	–	–	–	–	–	–	–	–	–	–	–	–	–
Calif.	5	5	2	2	4	4	4	8	8	3	7	7	5
Alaska	–	–	–	–	–	–	–	–	–	–	–	–	–
Hawaii	–	–	1	1	–	–	–	–	–	–	–	–	–
Guam	U	–	U	–	1	U	–	U	–	U	U	–	–
P.R.	U	–	U	–	–	U	–	U	–	U	U	–	–
V.I.	–	–	–	–	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	–

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 9, 1982 and January 10, 1981 (1st week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	557	518	307	307	–	3	3	3	3	71
NEW ENGLAND	6	11	5	5	–	–	–	–	–	1
Maine	–	–	1	1	–	–	–	–	–	1
N.H.	–	–	–	–	–	–	–	–	–	–
Vt.	–	–	2	2	–	–	–	–	–	–
Mass.	6	9	1	1	–	–	–	–	–	–
R.I.	–	–	1	1	–	–	–	–	–	–
Conn.	–	2	–	–	–	–	–	–	–	–
MID. ATLANTIC	56	74	21	21	–	–	–	–	–	–
Upstate N.Y.	–	–	–	–	–	–	–	–	–	–
N.Y. City	42	45	16	16	–	–	–	–	–	–
N.J.	3	10	–	–	–	–	–	–	–	–
Pa.	11	19	5	5	–	–	–	–	–	–
E.N. CENTRAL	10	35	48	48	–	–	–	–	–	7
Ohio	5	4	20	20	–	–	–	–	–	–
Ind.	2	3	13	13	–	–	–	–	–	1
Ill.	–	18	15	15	–	–	–	–	–	2
Mich.	2	3	–	–	–	–	–	–	–	–
Wis.	1	7	–	–	–	–	–	–	–	4
W.N. CENTRAL	10	9	1	1	–	–	–	–	–	25
Minn.	–	–	–	–	–	–	–	–	–	8
Iowa	–	–	–	–	–	–	–	–	–	8
Mo.	10	5	1	1	–	–	–	–	–	3
N. Dak.	–	–	–	–	–	–	–	–	–	3
S. Dak.	–	–	–	–	–	–	–	–	–	–
Nebr.	–	2	–	–	–	–	–	–	–	1
Kans.	–	2	–	–	–	–	–	–	–	2
S. ATLANTIC	175	127	76	76	–	–	–	1	1	10
Del.	–	1	–	–	–	–	–	–	–	–
Md.	4	9	15	15	–	–	–	–	–	–
D.C.	9	14	4	4	–	–	–	–	–	–
Va.	6	5	5	5	–	–	–	–	–	4
W. Va.	–	–	2	2	–	–	–	–	–	–
N.C.	20	19	6	6	–	–	–	1	1	–
S.C.	7	11	16	16	–	–	–	–	–	–
Ga.	42	37	28	28	–	–	–	–	–	5
Fla.	87	31	–	–	–	–	–	–	–	1
E.S. CENTRAL	45	60	29	29	–	–	–	2	2	11
Ky.	–	3	8	8	–	–	–	–	–	2
Tenn.	8	21	11	11	–	–	–	–	–	7
Ala.	16	27	10	10	–	–	–	2	2	2
Miss.	21	9	–	–	–	–	–	–	–	–
W.S. CENTRAL	184	143	–	–	–	–	–	–	–	7
Ark.	7	–	–	–	–	–	–	–	–	3
La.	–	–	–	–	–	–	–	–	–	–
Okla.	1	–	–	–	–	–	–	–	–	2
Tex.	176	143	–	–	–	–	–	–	–	2
MOUNTAIN	3	3	12	12	–	–	–	–	–	1
Mont.	–	–	–	–	–	–	–	–	–	1
Idaho	–	–	–	–	–	–	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–
Colo.	–	2	6	6	–	–	–	–	–	–
N. Mex.	–	–	3	3	–	–	–	–	–	–
Ariz.	–	–	3	3	–	–	–	–	–	–
Utah	–	–	–	–	–	–	–	–	–	–
Nev.	3	1	–	–	–	–	–	–	–	–
PACIFIC	68	56	115	115	–	3	3	–	–	9
Wash.	–	2	–	–	–	–	–	–	–	–
Oreg.	–	1	3	3	–	–	–	–	–	–
Calif.	66	51	109	109	–	3	3	–	–	9
Alaska	–	1	–	–	–	–	–	–	–	–
Hawaii	2	1	3	3	–	–	–	–	–	–
Guam	–	–	U	–	–	U	–	U	–	–
P.R.	–	1	U	–	–	U	–	U	–	–
V.I.	–	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	–	–	U	–	–	U	–	U	–	–

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 9, 1982 (1st week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	768	543	149	40	15	21	40
Boston, Mass.	212	145	39	14	6	8	11
Bridgeport, Conn.	40	30	8	1	1	–	6
Cambridge, Mass.	24	15	7	2	–	–	3
Fall River, Mass.	31	23	5	2	1	–	1
Hartford, Conn.	75	51	17	3	2	2	2
Lowell, Mass.	32	24	8	–	–	–	–
Lynn, Mass.	16	9	6	1	–	–	–
New Bedford, Mass.	24	23	–	1	–	–	–
New Haven, Conn.	61	38	15	5	2	1	2
Providence, R.I.	85	65	12	5	1	2	5
Somerville, Mass.	11	10	1	–	–	–	2
Springfield, Mass.	44	33	8	1	–	2	5
Waterbury, Conn.	39	23	9	2	1	4	2
Worcester, Mass.	74	56	14	3	1	2	1
MID. ATLANTIC	2,626	1,702	655	179	60	30	105
Albany, N.Y.	46	31	10	3	–	2	2
Allentown, Pa.	20	12	6	2	–	–	2
Buffalo, N.Y.	100	71	20	6	3	–	8
Camden, N.J.	38	25	12	1	–	–	–
Elizabeth, N.J.	24	15	9	–	–	–	2
Erie, Pa.†	41	27	10	3	1	–	–
Jersey City, N.J.	47	29	16	1	1	–	–
N.Y. City, N.Y.	1,419	902	359	113	33	12	49
Newark, N.J.	68	36	17	10	4	1	7
Paterson, N.J.	28	15	8	4	1	–	1
Philadelphia, Pa.†	293	189	77	11	9	4	9
Pittsburgh, Pa.†	125	77	38	8	1	1	2
Reading, Pa.	34	25	5	3	–	1	3
Rochester, N.Y.	124	86	29	7	2	–	12
Schenectady, N.Y.	23	17	5	1	–	–	1
Scranton, Pa.†	31	25	3	–	3	–	2
Syracuse, N.Y.	87	64	13	2	–	8	3
Trenton, N.J.	26	15	7	2	2	–	–
Utica, N.Y.	16	12	4	–	–	–	1
Yonkers, N.Y.	39	29	7	2	–	1	1
E.N. CENTRAL	2,459	1,583	609	115	76	75	96
Akron, Ohio	96	70	17	4	2	3	–
Canton, Ohio	48	35	9	4	–	–	2
Chicago, Ill.	518	301	144	33	25	15	8
Cincinnati, Ohio	150	104	31	6	6	3	17
Cleveland, Ohio	190	107	51	11	8	13	5
Columbus, Ohio	89	56	23	6	1	3	3
Dayton, Ohio	135	83	41	4	1	6	5
Detroit, Mich.	277	156	80	19	10	12	12
Evansville, Ind.	71	50	19	1	1	–	5
Fort Wayne, Ind.	111	69	33	3	3	3	9
Gary, Ind.	27	16	7	4	–	–	1
Grand Rapids, Mich.	65	46	15	1	1	2	4
Indianapolis, Ind.	179	111	47	9	8	4	7
Madison, Wis.	31	22	6	1	1	1	4
Milwaukee, Wis.	186	138	42	3	2	1	2
Peoria, Ill.	18	12	3	1	1	1	3
Rockford, Ill.	56	37	12	–	3	4	5
South Bend, Ind.	42	27	14	–	–	1	2
Toledo, Ohio§	106	100	–	2	1	2	7
Youngstown, Ohio	64	43	15	3	2	1	–
W.N. CENTRAL	848	576	166	44	28	34	30
Des Moines, Iowa	55	40	6	3	4	2	1
Duluth, Minn.	32	29	2	–	–	1	2
Kansas City, Kans.	37	20	13	2	1	1	1
Kansas City, Mo.	132	97	24	5	2	4	5
Lincoln, Nebr.	42	27	10	3	1	1	2
Minneapolis, Minn.	95	61	18	5	4	7	3
Omaha, Nebr.	109	74	21	3	6	5	3
St. Louis, Mo.	142	93	31	10	3	5	4
St. Paul, Minn.	80	58	13	3	2	4	1
Wichita, Kans.	124	77	28	10	5	4	9
S. ATLANTIC	1,313	802	349	85	32	44	59
Atlanta, Ga.	151	84	42	16	5	4	9
Baltimore, Md.	188	111	42	11	8	16	5
Charlotte, N.C.	76	43	23	6	–	3	5
Jacksonville, Fla.	132	81	41	7	1	2	7
Miami, Fla.	107	51	35	11	5	5	2
Norfolk, Va.	79	57	12	6	–	4	7
Richmond, Va.	89	59	24	5	–	1	7
Savannah, Ga.	47	33	9	2	2	1	4
St. Petersburg, Fla.	113	95	15	–	2	1	8
Tampa, Fla.	80	48	25	4	1	2	2
Washington, D.C.	198	110	66	12	5	5	1
Wilmington, Del.	53	30	15	5	3	–	2
E.S. CENTRAL	781	469	221	57	24	16	25
Birmingham, Ala.	111	70	25	11	3	2	4
Chattanooga, Tenn.	46	29	14	1	1	1	3
Knoxville, Tenn.	66	42	17	2	3	2	1
Louisville, Ky.	128	78	30	15	2	3	9
Memphis, Tenn.	202	107	73	14	6	2	6
Mobile, Ala.	30	15	8	3	3	1	–
Montgomery, Ala.	58	36	15	4	1	2	1
Nashville, Tenn.	146	92	39	7	5	3	1
W.S. CENTRAL	1,356	803	323	107	65	57	51
Austin, Tex.	42	29	7	2	2	2	1
Baton Rouge, La.	54	37	9	2	1	5	3
Corpus Christi, Tex.	48	26	7	8	3	3	1
Dallas, Tex.	244	134	71	19	9	11	2
El Paso, Tex.	75	46	16	7	4	2	4
Fort Worth, Tex.	102	68	24	3	7	–	9
Houston, Tex.	148	78	37	17	14	2	3
Little Rock, Ark.	76	50	17	5	3	1	7
New Orleans, La.	184	91	49	19	5	20	3
San Antonio, Tex.	205	126	46	17	11	5	13
Shreveport, La.	44	30	10	1	–	3	–
Tulsa, Okla.	134	88	30	7	6	3	5
MOUNTAIN	745	454	173	64	36	16	39
Albuquerque, N.Mex.	87	31	22	18	13	1	5
Colo. Springs, Colo.	43	32	8	1	2	–	3
Denver, Colo.	138	85	34	14	2	3	8
Las Vegas, Nev.	86	46	22	10	6	2	4
Ogden, Utah	31	24	4	2	1	–	4
Phoenix, Ariz.	177	114	47	9	3	4	2
Pueblo, Colo.	20	13	4	2	1	–	2
Salt Lake City, Utah	49	32	10	3	1	3	–
Tucson, Ariz.	114	77	22	5	7	3	11
PACIFIC	1,920	1,262	429	114	53	61	82
Berkeley, Calif.	20	17	3	–	–	–	–
Fresno, Calif.	94	60	21	6	1	6	4
Glendale, Calif.	22	16	3	2	–	1	1
Honolulu, Hawaii	50	28	14	3	3	2	5
Long Beach, Calif.	98	60	26	5	3	4	2
Los Angeles, Calif.	547	352	130	36	19	10	24
Oakland, Calif.	81	52	17	7	1	4	5
Pasadena, Calif.	47	33	6	5	–	3	1
Portland, Oreg.	110	70	31	4	1	4	–
Sacramento, Calif.	88	59	18	4	3	4	5
San Diego, Calif.	133	89	30	7	4	3	2
San Francisco, Calif.	194	130	40	11	6	6	8
San Jose, Calif.	202	128	48	14	8	4	12
Seattle, Wash.	111	74	27	2	4	4	2
Spokane, Wash.	66	51	9	5	–	1	5
Tacoma, Wash.	57	43	6	3	–	5	6
TOTAL	12,822††	8,194	3,074	805	389	354	527

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 16, 1982 and January 17, 1981 (2nd week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	78	3	17	–	37,010	37,128	304	255	21	158	4	–
NEW ENGLAND	3	–	–	–	779	900	4	15	–	11	–	–
Maine	–	–	–	–	50	54	–	1	–	–	–	–
N.H.	2	–	–	–	32	45	2	1	–	–	–	–
Vt.	–	–	–	–	23	19	–	–	–	–	–	–
Mass.	1	–	–	–	274	335	–	11	–	11	–	–
R.I.	–	–	–	–	49	45	2	1	–	–	–	–
Conn.	–	–	–	–	351	403	–	1	–	–	–	–
MID. ATLANTIC	16	–	4	–	3,441	3,696	33	28	3	10	–	–
Upstate N.Y.	2	–	1	–	327	167	12	13	3	8	–	–
N.Y. City	13	–	3	–	1,931	1,625	16	11	–	1	–	–
N.J.	–	–	–	–	453	964	5	4	–	1	–	–
Pa.	1	–	–	–	730	940	–	–	–	–	–	–
E.N. CENTRAL	5	–	5	–	4,493	3,905	42	28	3	16	–	–
Ohio	–	–	–	–	1,840	1,058	2	–	–	1	–	–
Ind.	–	–	2	–	252	315	11	4	–	11	–	–
Ill.	–	–	–	–	531	853	8	1	3	–	–	–
Mich.	8	–	2	–	1,291	1,168	17	21	–	4	–	–
Wis.	1	–	1	–	579	511	4	2	–	–	–	–
W.N. CENTRAL	5	–	–	–	1,866	1,988	15	4	–	6	–	–
Minn.	1	–	–	–	348	130	8	2	–	–	–	–
Iowa	–	–	–	–	158	193	–	–	–	–	–	–
Mo.	4	–	–	–	830	1,055	5	2	–	5	–	–
N. Dak.	–	–	–	–	20	29	–	–	–	–	–	–
S. Dak.	–	–	–	–	53	56	–	–	–	–	–	–
Nebr.	–	–	–	–	95	161	2	–	–	–	–	–
Kans.	–	–	–	–	362	364	–	–	–	1	–	–
S. ATLANTIC	6	–	–	–	11,024	8,820	8	45	1	10	–	–
Del.	–	–	–	–	157	185	–	10	–	1	–	–
Md.	–	–	–	–	1,700	894	–	–	–	1	–	–
D.C.	–	–	–	–	432	502	–	–	–	–	–	–
Va.	–	–	–	–	705	768	4	12	–	3	–	–
W. Va.	–	–	–	–	101	139	2	3	–	–	–	–
N.C.	2	–	–	–	2,003	1,547	–	10	–	4	–	–
S.C.	–	–	–	–	744	937	–	4	–	–	–	–
Ga.	–	–	–	–	1,678	2,025	1	1	–	–	–	–
Fla.	4	–	–	–	3,504	1,824	1	5	1	1	–	–
E.S. CENTRAL	7	–	1	–	2,548	3,578	13	23	1	4	2	–
Ky.	1	–	–	–	332	486	5	8	1	1	–	–
Tenn.	3	–	1	–	1,022	1,186	8	10	–	2	–	–
Ala.	2	–	–	–	697	1,180	–	5	–	1	2	–
Miss.	1	–	–	–	497	726	–	–	–	–	–	–
W.S. CENTRAL	4	–	1	–	6,034	7,161	55	21	–	30	–	–
Ark.	–	–	–	–	624	432	–	–	–	–	–	–
La.	–	–	–	–	611	797	4	3	–	2	–	–
Okla.	1	–	–	–	639	587	3	2	–	3	–	–
Tex.	3	–	1	–	4,160	5,345	48	16	–	25	–	–
MOUNTAIN	2	–	–	–	1,310	1,324	42	18	9	13	2	–
Mont.	–	–	–	–	84	45	1	1	–	–	–	–
Idaho	–	–	–	–	46	34	5	–	–	–	–	–
Wyo.	–	–	–	–	44	45	1	–	–	–	–	–
Colo.	–	–	–	–	333	403	8	2	–	5	1	–
N. Mex.	–	–	–	–	128	168	10	1	–	2	–	–
Ariz.	1	–	–	–	407	315	15	5	1	5	1	–
Utah	1	–	–	–	49	51	1	1	2	1	–	–
Nev.	–	–	–	–	219	263	1	8	6	–	–	–
PACIFIC	26	3	6	–	5,515	5,756	92	73	4	58	–	–
Wash.	–	–	1	–	434	426	21	5	2	1	–	–
Oreg.	–	–	–	–	323	354	4	2	2	–	–	–
Calif.	19	3	5	–	4,472	4,728	64	63	–	57	–	–
Alaska	–	–	–	–	176	112	3	–	–	–	–	–
Hawaii	7	–	–	–	110	136	–	3	–	–	–	–
Guam	U	–	–	–	–	14	U	U	U	U	U	–
P.R.	U	–	–	–	–	101	U	U	U	U	U	–
V.I.	U	–	–	–	3	–	U	U	U	U	U	–
Pac. Trust Terr.	U	–	–	–	–	23	U	U	U	U	U	–

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 16, 1982 and January 17, 1981 (2nd week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	7	14	6	11	64	51	86	69	111	8	34	50	67
NEW ENGLAND	–	–	1	2	2	2	7	4	10	–	3	3	17
Maine	–	–	–	–	–	1	1	1	2	–	–	–	12
N.H.	–	–	–	1	1	–	3	2	2	–	3	3	5
Vt.	–	–	1	1	1	–	1	1	1	–	–	–	–
Mass.	–	–	–	–	–	–	–	–	5	–	–	–	–
R.I.	–	–	–	–	–	–	1	–	–	–	–	–	–
Conn.	–	–	–	–	–	1	1	–	–	–	–	–	–
MID. ATLANTIC	1	1	3	4	17	7	12	7	7	1	–	1	12
Upstate N.Y.	–	–	2	3	9	1	1	3	3	1	–	1	2
N.Y. City	1	1	–	–	2	4	4	1	1	–	–	–	3
N.J.	–	–	–	–	3	–	5	1	1	–	–	–	5
Pa.	–	–	1	1	3	2	2	2	2	–	–	–	2
E.N. CENTRAL	1	1	–	–	4	3	4	38	48	1	1	1	9
Ohio	–	–	–	–	–	–	–	24	24	–	–	–	–
Ind.	–	–	–	–	–	–	–	3	5	–	–	–	5
Ill.	–	–	–	–	–	–	–	–	2	–	–	–	–
Mich.	1	1	–	–	4	3	4	10	15	1	1	1	1
Wis.	–	–	–	–	–	–	–	1	2	–	–	–	3
W.N. CENTRAL	–	–	–	–	–	4	5	4	8	–	1	2	3
Minn.	–	–	–	–	–	3	3	–	–	–	–	1	–
Iowa	–	–	–	–	–	1	1	2	2	–	–	–	–
Mo.	–	–	–	–	–	–	1	–	2	–	–	–	–
N. Dak.	–	–	–	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	–	–	–
Nebr.	–	–	–	–	–	–	–	–	–	–	–	–	–
Kans.	–	–	–	–	–	–	–	2	4	–	1	1	3
S. ATLANTIC	–	2	–	–	4	6	13	2	10	–	–	4	6
Del.	–	–	–	–	–	–	–	–	–	–	–	–	–
Md.	–	–	–	–	–	1	1	1	1	–	–	–	–
D.C.	–	–	–	–	–	–	–	–	–	–	–	–	–
Va.	–	1	–	–	–	1	2	–	1	–	–	4	–
W. Va.	–	–	–	–	1	1	1	1	7	–	–	–	4
N.C.	–	–	–	–	–	–	–	–	–	–	–	–	2
S.C.	–	1	–	–	–	1	3	–	1	–	–	–	–
Ga.	–	–	–	–	1	1	4	–	–	–	–	–	–
Fla.	–	–	–	–	2	1	2	–	–	–	–	–	–
E.S. CENTRAL	–	–	1	1	–	4	7	–	1	1	2	3	2
Ky.	–	–	–	–	–	1	1	–	1	–	2	3	2
Tenn.	–	–	1	1	–	2	3	–	–	1	–	–	–
Ala.	–	–	–	–	–	1	3	–	–	–	–	–	–
Miss.	–	–	–	–	–	–	–	–	–	–	–	–	–
W.S. CENTRAL	–	–	–	–	3	5	11	1	2	–	6	6	2
Ark.	–	–	–	–	–	–	–	–	–	–	–	–	–
La.	–	–	–	–	–	–	2	–	–	–	–	–	–
Okla.	–	–	–	–	–	–	–	–	–	–	–	–	–
Tex.	–	–	–	–	3	5	9	1	2	–	6	6	2
MOUNTAIN	1	1	–	–	4	2	5	–	3	2	1	2	–
Mont.	–	–	–	–	–	1	1	–	–	–	–	–	–
Idaho	–	–	–	–	–	–	–	–	1	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	1	–
Colo.	1	1	–	–	–	–	1	–	–	–	–	–	–
N. Mex.	–	–	–	–	–	–	1	–	–	2	–	–	–
Ariz.	–	–	–	–	–	1	1	–	1	–	–	–	–
Utah	–	–	–	–	–	–	1	–	1	–	1	1	–
Nev.	–	–	–	–	4	–	–	–	–	–	–	–	–
PACIFIC	4	9	1	4	30	18	22	13	22	3	20	28	16
Wash.	1	1	–	–	–	3	3	7	8	–	–	1	–
Oreg.	–	–	–	–	–	7	7	–	–	–	–	–	–
Calif.	3	8	1	3	30	7	11	6	14	3	19	26	16
Alaska	–	–	–	–	–	1	1	–	–	–	–	–	–
Hawaii	–	–	–	1	–	–	–	–	–	–	1	1	–
Guam	U	–	U	–	1	U	–	U	–	U	U	–	–
P.R.	U	–	U	–	–	U	–	U	–	U	U	–	–
V.I.	U	–	U	–	–	U	–	U	–	U	U	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	–

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 16, 1982 and January 17, 1981 (2nd week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	1,123	1,135	324	634	1	8	11	2	5	144
NEW ENGLAND	20	16	4	9	–	–	–	–	–	3
Maine	–	–	–	1	–	–	–	–	–	3
N.H.	–	–	–	–	–	–	–	–	–	–
Vt.	–	–	–	2	–	–	–	–	–	–
Mass.	13	13	–	1	–	–	–	–	–	–
R.I.	1	1	2	3	–	–	–	–	–	–
Conn.	6	2	2	2	–	–	–	–	–	–
MID. ATLANTIC	171	159	54	75	–	1	1	–	–	–
Upstate N.Y.	13	14	20	20	–	1	1	–	–	–
N.Y. City	128	95	34	50	–	–	–	–	–	–
N.J.	13	19	–	–	–	–	–	–	–	–
Pa.	17	31	U	5	–	–	–	–	–	–
E.N. CENTRAL	20	78	41	89	–	–	–	–	–	15
Ohio	7	21	11	31	–	–	–	–	–	–
Ind.	2	4	1	14	–	–	–	–	–	2
Ill.	–	37	21	36	–	–	–	–	–	5
Mich.	7	7	U	–	–	–	–	–	–	–
Wis.	4	9	8	8	–	–	–	–	–	8
W.N. CENTRAL	28	18	4	5	1	–	–	–	–	54
Minn.	7	2	–	–	–	–	–	–	–	14
Iowa	–	–	1	1	–	–	–	–	–	16
Mo.	20	12	–	1	1	–	–	–	–	6
N. Dak.	1	–	–	–	–	–	–	–	–	5
S. Dak.	–	–	1	1	–	–	–	–	–	–
Nebr.	–	2	–	–	–	–	–	–	–	8
Kans.	–	2	2	2	–	–	–	–	–	5
S. ATLANTIC	319	234	54	130	–	1	1	1	2	19
Del.	2	1	1	1	–	–	–	–	–	–
Md.	15	25	10	25	–	–	–	–	–	–
D.C.	21	27	2	6	–	–	–	–	–	–
Va.	25	11	–	5	–	1	1	–	–	7
W. Va.	1	–	2	4	–	–	–	–	–	2
N.C.	24	28	9	15	–	–	–	1	2	–
S.C.	18	19	1	17	–	–	–	–	–	2
Ga.	68	69	9	37	–	–	–	–	–	7
Fla.	145	54	20	20	–	–	–	–	–	1
E.S. CENTRAL	69	119	26	55	–	–	–	–	2	13
Ky.	7	5	5	13	–	–	–	–	–	2
Tenn.	8	44	13	24	–	–	–	–	–	7
Ala.	28	45	8	18	–	–	–	–	2	4
Miss.	26	25	–	–	–	–	–	–	–	–
W.S. CENTRAL	330	311	32	35	–	1	1	–	–	17
Ark.	11	–	–	–	–	–	–	–	–	4
La.	33	35	2	2	–	–	–	–	–	–
Okla.	6	3	2	5	–	1	1	–	–	3
Tex.	280	273	28	28	–	–	–	–	–	10
MOUNTAIN	20	13	6	18	–	–	–	–	–	1
Mont.	–	–	–	–	–	–	–	–	–	1
Idaho	–	–	–	–	–	–	–	–	–	–
Wyo.	1	–	–	–	–	–	–	–	–	–
Colo.	10	7	1	7	–	–	–	–	–	–
N. Mex.	4	–	–	3	–	–	–	–	–	–
Ariz.	1	–	5	8	–	–	–	–	–	–
Utah	1	–	–	–	–	–	–	–	–	–
Nev.	3	6	–	–	–	–	–	–	–	–
PACIFIC	146	187	103	218	–	5	8	1	1	22
Wash.	–	4	1	1	–	–	–	–	–	–
Oreg.	4	4	3	6	–	–	–	–	–	–
Calif.	140	176	97	206	–	5	8	1	1	20
Alaska	–	1	–	–	–	–	–	–	–	2
Hawaii	2	2	2	5	–	–	–	–	–	–
Guam	–	–	U	–	–	U	–	U	–	–
P.R.	–	10	U	–	–	U	–	U	–	–
V.I.	–	–	U	–	–	U	–	U	–	–
Pac. Trust Terr.	–	–	U	–	–	U	–	U	–	–

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 16, 1982 (2nd week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	598	359	146	20	15	18	37
Boston, Mass.	171	99	48	8	5	11	13
Bridgeport, Conn.	65	54	11	–	–	–	–
Cambridge, Mass.	23	19	4	–	–	–	4
Fall River, Mass.	29	25	3	–	–	1	–
Hartford, Conn.	44	26	11	3	2	2	1
Lowell, Mass.	15	10	5	–	–	–	–
Lynn, Mass.	18	10	6	–	1	1	1
New Bedford, Mass.	15	10	4	1	–	–	1
New Haven, Conn.	37	23	11	2	1	–	4
Providence, R.I.	57	41	13	3	–	–	4
Somerville, Mass.	6	5	1	–	–	–	–
Springfield, Mass.	58	37	14	–	5	2	1
Waterbury, Conn.	29	22	6	–	1	–	3
Worcester, Mass.	31	18	9	3	–	1	5
MID. ATLANTIC	2,660	2,114	310	81	70	60	98
Albany, N.Y.	49	30	16	1	1	1	3
Allentown, Pa.	13	10	3	–	–	–	2
Buffalo, N.Y.	100	66	24	4	3	3	5
Camden, N.J.	45	25	12	4	4	–	–
Elizabeth, N.J.	26	24	2	–	–	–	2
Erie, Pa.†	44	35	6	–	2	1	1
Jersey City, N.J.	45	35	8	1	–	1	–
N.Y. City, N.Y. §	1,425	1,323	9	13	33	22	51
Newark, N.J.	89	43	32	6	2	6	9
Paterson, N.J.	39	19	8	2	1	9	1
Philadelphia, Pa.†	306	181	89	21	8	7	12
Pittsburgh, Pa.†	62	41	17	2	–	2	1
Reading, Pa.	38	30	5	3	–	–	1
Rochester, N.Y.	137	93	25	11	4	4	4
Schenectady, N.Y.	18	14	3	–	–	1	–
Scranton, Pa.†	29	21	7	1	–	–	2
Syracuse, N.Y.	114	73	23	8	7	3	2
Trenton, N.J.	39	25	10	3	1	–	–
Utica, N.Y.	15	9	4	–	2	–	–
Yonkers, N.Y.	27	17	7	1	2	–	2
E.N. CENTRAL	2,584	1,643	607	154	78	102	77
Akron, Ohio	89	70	15	–	2	2	–
Canton, Ohio	38	30	7	1	–	–	3
Chicago, Ill.	621	354	162	49	24	32	12
Cincinnati, Ohio	179	103	50	14	4	8	7
Cleveland, Ohio	119	75	32	4	3	5	–
Columbus, Ohio	178	108	39	11	9	11	7
Dayton, Ohio	117	65	37	9	2	4	2
Detroit, Mich.	298	169	78	30	9	12	10
Evansville, Ind.	64	52	8	1	1	2	4
Fort Wayne, Ind.	50	33	14	3	–	–	–
Gary, Ind.	14	8	2	3	–	1	1
Grand Rapids, Mich.	94	68	21	3	1	1	5
Indianapolis, Ind.	162	104	35	7	8	8	5
Madison, Wis.	59	41	10	4	2	2	5
Milwaukee, Wis.	186	141	30	5	3	7	3
Peoria, Ill.	29	17	9	–	1	2	4
Rockford, Ill.	42	33	6	1	2	–	3
South Bend, Ind.	74	54	15	1	2	2	3
Toledo, Ohio	106	69	26	7	3	1	2
Youngstown, Ohio	65	49	11	1	2	2	1
W.N. CENTRAL	782	539	155	40	18	30	39
Des Moines, Iowa	59	49	7	2	1	–	2
Duluth, Minn.	32	21	8	2	1	–	3
Kansas City, Kans.	36	22	9	2	1	2	2
Kansas City, Mo.	105	72	19	6	1	7	5
Lincoln, Nebr.	36	26	6	3	1	–	3
Minneapolis, Minn.	128	93	21	8	–	6	2
Omaha, Nebr.	91	59	23	6	1	2	6
St. Louis, Mo.	140	88	30	5	8	9	3
St. Paul, Minn.	81	60	15	4	1	1	4
Wichita, Kans.	74	49	17	2	3	3	9
S. ATLANTIC	1,102	674	273	75	49	29	47
Atlanta, Ga.	96	55	24	8	4	5	3
Baltimore, Md.	252	154	61	18	14	5	6
Charlotte, N.C.	51	30	12	4	2	1	1
Jacksonville, Fla.	106	58	35	9	3	1	–
Miami, Fla.	87	44	27	9	6	1	3
Norfolk, Va.	57	36	13	2	2	4	5
Richmond, Va.	91	50	26	3	7	5	7
Savannah, Ga.	51	37	8	3	1	2	7
St. Petersburg, Fla.	115	104	7	1	–	3	6
Tampa, Fla.	66	38	14	8	4	2	4
Washington, D.C.	69	36	25	4	4	–	1
Wilmington, Del.	61	32	21	6	2	–	4
E.S. CENTRAL	812	527	202	35	26	22	41
Birmingham, Ala.	93	57	24	4	4	4	2
Chattanooga, Tenn.	101	62	32	3	3	1	7
Knoxville, Tenn.	40	30	8	1	1	–	1
Louisville, Ky.	131	80	34	1	5	11	8
Memphis, Tenn.	168	111	39	10	8	–	7
Mobile, Ala.	109	69	24	11	1	4	3
Montgomery, Ala.	53	43	7	2	1	–	1
Nashville, Tenn.	117	75	34	3	3	2	12
W.S. CENTRAL	1,305	760	316	106	59	63	50
Austin, Tex.	76	51	15	5	3	2	3
Baton Rouge, La.	44	33	7	3	1	–	1
Corpus Christi, Tex.	36	20	8	2	1	6	1
Dallas, Tex.	219	134	49	15	12	9	8
El Paso, Tex.	70	40	18	7	2	3	3
Fort Worth, Tex.	84	56	17	9	2	–	5
Houston, Tex.	251	100	86	33	21	11	3
Little Rock, Ark.	64	37	11	5	2	9	6
New Orleans, La.	143	77	42	9	8	7	3
San Antonio, Tex.	188	125	41	8	5	9	8
Shreveport, La.	43	24	7	6	1	5	3
Tulsa, Okla.	87	63	15	4	1	4	6
MOUNTAIN	685	402	155	45	43	35	32
Albuquerque, N.Mex	93	39	23	13	16	1	2
Colo. Springs, Colo.	39	19	17	2	–	1	6
Denver, Colo.	145	91	27	10	6	11	3
Las Vegas, Nev.	75	41	19	6	5	4	2
Ogden, Utah	28	22	3	–	1	2	1
Phoenix, Ariz.	134	85	32	4	4	9	3
Pueblo, Colo.	32	19	5	4	3	1	1
Salt Lake City, Utah	36	17	10	3	2	4	1
Tucson, Ariz.	103	69	23	3	6	2	13
PACIFIC	1,823	1,225	378	122	59	37	85
Berkeley, Calif.	26	20	5	1	–	–	–
Fresno, Calif.	67	48	13	2	2	2	3
Glendale, Calif.	25	19	5	–	–	1	2
Honolulu, Hawaii	65	37	19	6	1	2	5
Long Beach, Calif.	86	55	20	7	2	2	4
Los Angeles, Calif.	511	317	121	42	22	8	15
Oakland, Calif.	50	34	10	4	1	1	3
Pasadena, Calif.	33	27	4	1	1	–	–
Portland, Oreg.	161	111	30	7	10	3	4
Sacramento, Calif.	76	51	17	5	1	2	5
San Diego, Calif.	103	72	15	7	4	5	6
San Francisco, Calif.	171	116	30	16	5	3	3
San Jose, Calif.	165	115	36	9	2	3	16
Seattle, Wash.	153	100	32	12	5	4	6
Spokane, Wash.	85	66	13	3	2	1	10
Tacoma, Wash.	46	37	8	–	1	–	3
TOTAL	12,351††	8,283	2,546	678	417	396	506

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Insulin Infusion Pumps – Continued

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Editorial Note: The introduction of CSII pumps into clinical practice has provided a new modality of therapy for the treatment of insulin-dependent diabetics, who represent 5%-15% of all diabetics. Because pumps are classified as devices, they do not require the same extensive FDA evaluation that drugs do before being released. The literature on the clinical experience with these devices is limited to carefully controlled, short-term conditions. This report provides the first available information on a community experience with this new technology.

Extrapolating the rates of 19-92/100,000 diabetics nationally suggests that between 1,000 and 4,800 diabetics have been begun on pumps. In the Atlanta area, physicians generally restrict use of the pumps to highly motivated, upper socio-economic-group patients with major clinical complications or with difficult blood-sugar-control problems.

As more information becomes available about the most appropriate use of these devices, the pattern of clinical usage may well change. Continued observation of the community use of CSII pumps should provide more information about patterns of utilization among physicians and patients, characteristics of patients being placed on pumps, indications used, and complications associated with this new technology.

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE	2nd WEEK ENDING			CUMULATIVE, FIRST 2 WEEKS		
	January 16 1982	January 17 1981	MEDIAN 1977-1981	January 16 1982	January 17 1981	MEDIAN 1977-1981
Aseptic meningitis	78	75	56	160	144	112
Brucellosis	–	3	3	3	3	3
Encephalitis: Primary (arthropod-borne & unspec.)	10	11	9	17	21	20
Post-infectious	–	1	1	–	2	2
Gonorrhea: Civilian	18,239	18,926	18,706	37,010	37,128	35,012
Military	533	672	496	1,032	1,227	1,128
Hepatitis: Type A	304	397	439	613	718	821
Type B	255	313	283	498	585	516
Non A, Non B	21	N	N	30	N	N
Unspecified	158	168	168	286	320	292
Legionellosis	4	N	N	5	N	N
Leprosy	–	4	2	–	6	5
Malaria	7	35	9	14	54	16
Measles (rubeola)	6	45	81	11	64	199
Meningococcal infections: Total	51	47	44	86	102	72
Civilian	51	47	44	86	102	72
Military	–	–	–	–	–	–
Mumps	69	83	250	111	143	363
Pertussis	8	13	21	18	21	31
Rubella (German measles)	34	38	88	50	67	142
Syphilis (Primary & Secondary): Civilian	566	617	428	1,123	1,135	859
Military	12	5	3	18	14	10
Tuberculosis	224	403	403	634	643	663
Tularemia	1	3	3	1	4	4
Typhoid fever	8	14	6	11	19	9
Typhus fever, tick-borne (RMSF)	2	1	1	5	4	2
Rabies, animal	73	54	47	144	168	89

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	–
Botulism	5	Paralytic	–
Cholera	1	Psittacosis	4
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus	1
Leptospirosis	–	Trichinosis (N.Y. City 2)	3
Plague	–	Typhus fever, flea-borne (endemic, murine)	–

N: Not notifiable

Influenza B, Influenza A(H1N1) — United States

Isolates of influenza B associated with sporadic cases of respiratory illness were reported from Arizona, New York, and Texas for September, October, and November (*1,2*). In December and early January, isolates of influenza type B virus were obtained from patients in Los Angeles, California; Honolulu, Hawaii; Las Vegas, Nevada; and Albuquerque, New Mexico. In addition to those reported earlier for patients in Houston, Texas, and Tucson, Arizona (*1*), isolates of influenza B were also obtained in these cities in December and early January.

Of 3 of the isolates obtained in Tucson in December, 2 were from patients (8 and 15 years old) hospitalized with pneumonia, and a third was from a 5-month-old infant seen for a respiratory illness at an outpatient clinic. In the second half of December, when these patients were seen, the number of cases of respiratory illness observed in Tucson rose. In early January, increased school absenteeism occurred in some localities and additional influenza B viruses were isolated.

Influenza B virus isolates from children and adults have again been reported from Houston; in Honolulu, influenza B viruses were recovered from 2 children, ages 12 and 13 years, who were seen early in December as outpatients with upper respiratory illness and fever. An influenza B virus isolate was obtained on December 22 in Albuquerque from a 9-month-old infant with respiratory illness. An isolate of influenza B virus was obtained from a 9-year-old girl from Los Angeles who was treated December 23 for influenza. In Las Vegas, influenza B viruses were isolated about January 5 from 2 children with respiratory illness.

Sporadic isolates of influenza A(H1N1) were recovered in mid-December or early January from 1 young adult in Salt Lake City, Utah; from 4 children or young adults in Houston, Texas; and from a child in San Francisco, California.

Reported by A Oda, Laboratories Br, NH Wiebenga, MD, State Epidemiologist, Hawaii State Dept of Health; LC McLaren, PhD, IJ Moody, MD, University of New Mexico Hospital, R Steece, MS, A Bond, Scientific Laboratories Div, JM Mann, MD, State Epidemiologist, New Mexico Health and Environment Dept; L Drew, MD, Mt. Zion Hospital, San Francisco, S Fannin, MD, Los Angeles County Health Dept, J Chin, MD, State Epidemiologist, California Dept of Public Health; R Worrell, RN, P Noland, MD, Pima County Health Dept, L Minnich, MS, G Ray, MD, University Hospital, Tucson, J Sacks, MD, Acting State Epidemiologist, Arizona Dept of Health Svcs; P Glezen, MD, Influenza Research Center, Baylor College of Medicine, Houston, C Webb, Jr, MD, State Epidemiologist, Texas Dept of Health; P Reichelderfer, PhD, Sunrise Hospital, Las Vegas, JH Carr, MD, State Epidemiologist, Nevada Dept of Human Resources; C Smith, MD, University of Utah Medical Center, Salt Lake City, RE Johns, Jr, MD, State Epidemiologist, Utah State Dept of Health; WHO Collaborating Center for Influenza, Center for Infectious Diseases, CDC.

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Surveillance Summary

Measles, United States — Weeks 49-52, 1981

In 1981, a provisional total of 3,032 cases of measles were reported in the United States. This represents a 78% decrease from the 13,506 cases reported in 1980. In the 4-week period December 6, 1981, through January 2, 1982 (reporting weeks 49-52), 71 cases were reported. Of these 71 cases, 35 (49%) occurred in Pennsylvania. Fewer than 1% (28) of the

Measles — Continued

nation's 3,144 counties reported measles in this period (Figure 2). Throughout 1981, only 317 (10%) counties in the United States reported measles.

During weeks 49-52 there were 2 importations, both involving foreign citizens: 1 from the Republic of Korea and 1 from El Salvador. The cases were reported from upstate New York and Virginia, respectively. The importation from Korea involved a 7-month-old infant. The importation from El Salvador involved a 15-year-old high school foreign-exchange student who had rash onset on November 8, within 2 weeks of arrival in the United States. The latter patient's measles-immunity status had not been assessed before arrival in the United States. Two other students contracted measles from the index patient.

The student from El Salvador infected her brother, who had rash onset on November 18. He also is a foreign-exchange student, and introduced measles into New Hampshire (*1*). To date, 3 cases of measles have resulted from this importation into New Hampshire.

Reported by Quarantine Div, Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: Measles transmission continues to occur at very low levels in the United States. In the 4-week period discussed, more than 99% of the nation's 3,144 counties reported no measles, suggesting that measles transmission has been interrupted in these counties. Nearly half the measles cases were reported from 1 state, which has implemented a strong outbreak-control program.

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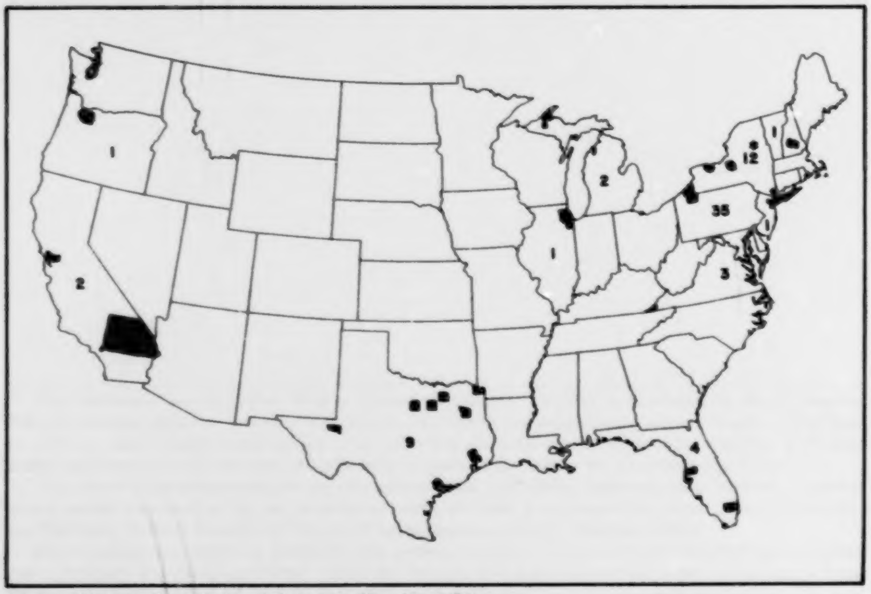
1. CDC. Measles, United States—Weeks 49-52, 1981. MMWR 1981;30:621-3.

FIGURE 2. States and counties reporting measles, weeks 49-52, December 9, 1981-January 2, 1982



*7 cases Upstate New York and 5 cases in New York City

Notice to Readers

TABLES I and III (Notifiable Diseases) REVISED

Beginning with this issue, the following changes, recommended by the Conference of State and Territorial Epidemiologists, have been made in the number of notifiable diseases reportable to the Centers for Disease Control:

1. Hepatitis, non-A, non-B and legionellosis have been added to Table I and p. 1 of Table III.
2. Chickenpox has been deleted from Tables I and III.

Erratum, Vol. 30, No. 52

p638. In the article "Psittacosis associated with turkey processing—Ohio," the following were omitted from the credits and should be added. CK Pulliam, Ohio State Dept of Health, Dayton; Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations and Field Services, NIOSH, CDC.

The Morbidity and Mortality Weekly Report, circulation 100,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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CENTERS FOR DISEASE CONTROL

January 29, 1982 / Vol. 31 / No. 3

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Acute Hemorrhagic Conjunctivitis — American Samoa

On December 30, 1981, CDC was notified of an outbreak of severe conjunctivitis on Tutuila, the main island of American Samoa. According to records from the clinics and emergency room of the Lyndon B. Johnson Tropical Medical Center (LBJTMC), the only publicly funded medical facility for the 30,000 residents of Tutuila, the outbreak began abruptly, with a mean of 4 cases/day from December 15 to 20; there was a sharp peak in the number of cases beginning December 21. A week later, on December 28, 181 cases were seen, and by January 4, 1982, a total of 1,034 cases had been diagnosed. It is estimated by health officials, however, that most affected persons have not sought medical attention. The reported cases include hospital staff, but there is no evidence of nosocomial transmission.

Illness is associated with an incubation period of l day or less, rapid intrafamily transmission and a high secondary attack rate in households, a duration of illness of 3-7 days, a clinical picture of marked bilateral subconjunctival hemorrhage or severe diffuse injection, blurred vision, eye pain or sensation of a foreign body, lid edema, and absence of either constitutional or upper-respiratory-tract signs and symptoms. Antibiotic eyedrops were given to patients visiting the LBJTMC until supplies were exhausted. Many patients treated themselves by instilling human breast milk into their eyes, or an extract from the bark of a tree (fu ' afu ' a or guest-tree, *Kleinhovia hospita*). No complications, including neurologic sequelae, have been reported.

The outbreak has been largely confined to the Polynesian population, and has occurred in at least 61 of 71 villages; it accelerated during a time when school was in holiday recess. Based on reports from 4 of 4 high schools and 21 of 23 elementary schools in the first week after school reopened, January 4-8, 1982, the daily absentee rate of students was 27.0% (2,663/9,850), with a somewhat higher absentee rate in high schools (38%) than in elementary schools (24%), $p << 0.001$, X^2. The normal daily absentee rate of all students combined is 4%. The daily absentee rate of teachers for the same week was 20% (69/353). On the basis of 981 patients (95%) of known age visiting the LBJTMC between December 15, 1981, and January 4, 1982, the following calculations can be made: male-to female case ratio, 0.91; age range, 1 week to 74 years; and rough age-adjusted incidence per 1,000 persons (with age group in parentheses), 15 (0-4), 18 (5-9), 19 (10-14), 25 (15-19), 43 (20-29), 57 (30-39), 52 (40-49), 37 (50-59), and 22 (≥60).

The following measures were taken to prevent further community and potential nosocomial transmission: broadcast of radio announcements advising hygienic measures to prevent intrafamily spread, school exclusion of affected pupils and teachers during the period January 4-8, and work exclusion of affected hospital staff involved in direct patient care. During the week of January 11-17, 1982, the school systems were closed. They were reopened on January 18 because of an apparent decrease in community cases.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

HE 20.7009:

Hemorrhagic Conjunctivitis – Continued

Reported by JP Turner, MD, Acting Director, Dept of Health, T Liega, MO, Director of Public Health Svcs, Dept of Health, MT Betham, Director of Education, Dept of Education, Government of American Samoa, GF Schecter, MD, MPH, Tutuila, American Samoa; Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: The clinical and epidemiologic features of this outbreak are consistent with acute hemorrhagic conjunctivitis (AHC), which has not previously been reported in American Samoa. AHC has occurred in Micronesia, Melanesia, and western Polynesia (*1,2*). In 1981, AHC epidemics first occurred in the Americas (*3*), including outbreaks in the southern United States (*4,5*). Most outbreaks of AHC have been associated with enterovirus 70; the etiologic agent in American Samoa awaits laboratory confirmation.

It is unclear whether public health measures such as school exclusion can reduce the impact of AHC epidemics in communities. Nevertheless, school exclusion has been implemented in recent outbreaks in the United States (*6*). Because of the apparent ease with which viral conjunctivitis can be transmitted via hands or fomites, special efforts to prevent nosocomial transmission may be indicated. Careful attention to thorough handwashing techniques should always be observed.

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3. CDC. Acute hemorrhagic conjunctivitis—Latin America. MMWR 1981;30:450-1.
4. CDC. Acute hemorrhagic conjunctivitis—Key West, Florida. MMWR 1981;30:463-4.
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6. CDC. Acute hemorrhagic conjunctivitis—Florida, North Carolina. MMWR 1981;30:501-2.

Recommendation of the Immunization Practices Advisory Committee (ACIP)

Poliomyelitis Prevention

This revised ACIP recommendation on poliomyelitis prevention addresses issues important in poliomyelitis control in the United States today. Specifically, situations that constitute increased risk are defined, and alternatives for protection are outlined. Recommendations for immunization of adults are presented, clarifying the role of inactivated polio vaccine in immunizing adults. These recommendations also address the problems of interrupted immunization schedules and completion of primary immunization. Oral polio vaccine remains the vaccine of choice for primary immunization of children.

This recommendation supersedes the recommendation on poliomyelitis published in MMWR 1979; 28:510-20.

Poliomyelitis Prevention – Continued

INTRODUCTION

Poliovirus vaccines, used widely since 1955, have dramatically reduced the incidence of poliomyelitis in the United States. The annual number of reported cases of paralytic disease declined from more than 18,000 in 1954 to an average annual number of less than 13 in 1973-1980. The risk of poliomyelitis is generally very small in the United States today, but epidemics are likely to occur if the immunity of the population is not maintained by immunizing children beginning in the first year of life. Small outbreaks have occurred in 1970, 1972, and 1979 as a result of introduction of virus into susceptible populations in communities with low immunization levels.

As a result of the Childhood Immunization Initiative efforts 1977-1979, immunization levels in children are now higher than ever before. The School Enterer Assessments in kindergarten and first-grade levels have indicated that the percentage of these children who have completed primary vaccination against poliomyelitis reached 95% in the 1980-1981 school year. Immunization levels in preschool children and in those who are in higher grades may be substantially lower than the levels at school entry.

Laboratory surveillance of enteroviruses shows that the circulation of wild polioviruses has diminished markedly. Inapparent infection with wild strains no longer contributes significantly to establishing or maintaining immunity, making universal vaccination of infants and children even more important.

POLIOVIRUS VACCINES

Two types of poliovirus vaccines are currently licensed in the United States: Oral Polio Vaccine (OPV)* and Inactivated Polio Vaccine (IPV).†

Oral Polio Vaccine (OPV)

Within several years after it was licensed in the United States in 1963, trivalent OPV, the live attenuated vaccine combining all 3 strains of poliovirus, almost totally supplanted the individual monovalent OPV antigens used earlier. Full primary vaccination with OPV will produce long-lasting immunity to all 3 poliovirus types in more than 95% of recipients. Most recipients are protected after a single dose.

OPV consistently induces intestinal immunity that provides resistance to reinfection with polioviruses. Administration of OPV may interfere with simultaneous infection by wild polioviruses, a property which is of special value in epidemic-control campaigns. In rare instances (once in approximately 3.2 million doses distributed), OPV has been associated with paralytic disease in vaccine recipients or their close contacts. In the 12-year period 1969-1980, approximately 290 million doses of OPV were distributed, and 92 cases of paralysis associated with vaccine were reported. Twenty-five cases of paralysis occurred in otherwise healthy vaccine recipients, 55 cases in healthy close contacts of vaccine recipients, and 12 cases in persons (recipients or contacts) with immune-deficiency conditions.

Inactivated Polio Vaccine (IPV)

Licensed in 1955, IPV has been used extensively in this country and many other parts of the world. It is given by subcutaneous injection. Where extensively used, IPV has brought about a great reduction in paralytic poliomyelitis cases. Approximately 428 million doses have been administered in the United States, mostly before 1962. Although IPV has not been

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*Official name: Poliovirus Vaccine, Live, Oral, Trivalent.

†Official name: Poliomyelitis Vaccine

Poliomyelitis Prevention – Continued

widely used in this country for more than a decade, a Canadian product licensed for use in the United States is now available.

It is generally accepted that primary vaccination with 4 doses of IPV produces immunity to all 3 poliovirus types in more than 95% of recipients. Additional experience with the IPV product available since 1968 is necessary to establish whether the duration of immunity is comparable to that induced by OPV. Experience in other countries forms the basis for the present recommendations on booster doses.

There is considerable evidence from epidemiologic studies that immunizing with IPV diminishes circulation of wild poliovirus in the community, although it is known that persons vaccinated with IPV can subsequently be infected with and excrete in feces either wild strains or attenuated vaccine virus strains. No paralytic reactions to IPV are known to have occurred since the 1955 cluster of poliomyelitis cases caused by vaccine that contained live polioviruses that had escaped inactivation. Serious adverse reactions are not anticipated with the current IPV product.

An improved IPV product with higher potency has been developed in Europe. Studies in Africa and Europe have revealed essentially 100% seroconversion following 2 doses. Duration of protection is under study. Preliminary studies are now under way in a U.S. population to compare this product with OPV.

ROUTINE IMMUNIZATION

Rationale for Choice of Vaccine

Although IPV and OPV are both effective in preventing poliomyelitis, OPV is the vaccine of choice for primary immunization of children in the United States when the benefits and risks for the entire population are considered. OPV is preferred because it induces intestinal immunity, is simple to administer, is well accepted by patients, results in immunization of some contacts of vaccinated persons, and has a record of having essentially eliminated disease associated with wild polioviruses in this country. The choice of OPV as the preferred polio vaccine in the United States has also been made by the Committee on Infectious Diseases of the American Academy of Pediatrics (*1*) and a special expert committee of the Institute of Medicine, National Academy of Sciences (*2*).

Some poliomyelitis experts contend that greater use of IPV in the United States for routine vaccination would provide continued control of naturally occurring poliovirus infections and simultaneously reduce the problem of OPV-associated disease. They argue that there is no substantial evidence that OPV and currently available IPV differ in their ability to protect individuals from disease. They question the public health significance of higher levels of gastrointestinal immunity achieved with OPV, and they question whether the transmission of vaccine virus to close contacts contributes substantially to the level of immunity achieved in the community.

Some countries successfully prevent poliomyelitis with IPV. However, because of many differences between these countries and the United States, particularly with respect to risks of exposure to wild polioviruses and the ability to achieve and maintain very high vaccination rates in the population, their experiences with IPV may not be directly applicable here.

Prospective vaccinees or their parents should be made aware of the polio vaccines available and the reasons why recommendations are made for giving specific vaccines at particular ages and under certain circumstances. Furthermore, the benefits and risks of the vaccines for individuals and the community should be stated so that vaccination is carried out among persons who are fully informed.

Poliomyelitis Prevention – Continued

RECOMMENDATIONS FOR INFANTS, CHILDREN, AND ADOLESCENTS

Primary Immunization (Table 1)

OPV: For infants, children, and adolescents through secondary school age (generally up to age 18) the primary series of OPV consists of 3 doses. In infancy the primary series is integrated with DTP vaccination, and the first dose is commonly given at 6-12 weeks of age. At all ages the first 2 doses should be separated by at least 6, and preferably 8, weeks. The third dose is given at least 6 weeks, customarily 8-12 months, after the second dose. In high-risk areas, an additional dose of OPV is often given within the first 6 months of life. Breast feeding does not interfere with successful immunization.

IPV: The primary series consists of 4 doses of vaccine; volume and route of injection are specified by the manufacturer. In infancy, the primary schedule is usually integrated with DTP vaccination, as with OPV. Three doses can be given at 4- to 8-week intervals; the fourth dose should follow 6-12 months after the third.

All children should complete primary immunization before entering school, preferably with all OPV or all IPV. If, however, a combination of IPV and OPV is used, a total of 4 doses constitutes a primary series.

Supplementary Immunization

OPV: Before entering school, all children who previously received primary immunization with OPV (3 doses) in early childhood should be given a fourth dose. However, if the third pri-

TABLE 1. Routine poliomyelitis immunization schedule summary, 1981*

Dose	OPV age/interval	IPV age/interval
Primary 1	Initial visit, preferably 6-12 weeks of age	Initial visit, preferably 6-12 weeks of age
Primary 2	Interval of 6-8 weeks	Interval of 4-8 weeks
Primary 3	Interval of ≥6 weeks, customarily 8-12 months	Interval of 4-8 weeks
Primary 4		Interval of 6-12 months
Supplementary	4-6 years of age† (school entry)	4-6 years of age† (school entry)
Additional supplementary		Interval of every 5 years§

*Important details are in the text.

†If the third primary dose of OPV is administered on or after the fourth birthday, a fourth (supplementary) dose is not required. If the fourth primary dose of IPV is administered on or after the fourth birthday, a fifth (supplementary) dose is not required at school entry.

§Supplementary doses are recommended every 5 years after the last dose until the 18th birthday or unless a complete primary series of OPV has been completed.

Poliomyelitis Prevention — Continued

mary dose is administered on or after the fourth birthday, a fourth (supplementary) dose is not required. The additional dose will increase the likelihood of complete immunity in the small percentage of children who have not previously developed serum antibodies to all 3 types of polioviruses. The need for supplementary doses after 4 doses of OPV has not been established, but children considered to be at increased risk of exposure to poliovirus (as noted below under **RECOMMENDATIONS FOR ADULTS**) may be given a single additional dose of OPV.

IPV: Before entering school, all children who previously received primary immunization with either IPV alone or a combination of IPV and OPV (a total of 4 doses) in early childhood should be given at least 1 dose of OPV or 1 additional dose of IPV. However, if the fourth primary dose is administered on or after the fourth birthday, a fifth (supplementary) dose is not required at school entry. Use of a primary series of OPV would eliminate the need for subsequent booster doses of IPV. Children who received primary immunization with IPV should obtain a booster dose of IPV every 5 years until the age of 18 years, unless a primary series of OPV is given. The need for such supplementary doses after the 5 basic doses of the currently available IPV product has not been firmly established. Further experience may lead to alteration of this recommendation.

(Continued on page 31)

TABLE I. Summary — cases of specified notifiable diseases, United States

DISEASE		3rd WEEK ENDING			CUMULATIVE, FIRST 3 WEEKS		
		January 23 1982	January 24 1981	MEDIAN 1977-1981	January 23 1982	January 24 1981	MEDIAN 1977-1981
Aseptic meningitis		92	41	43	253	189	162
Brucellosis		–	2	1	3	5	5
Encephalitis:	Primary (arthropod-borne & unspec.)	10	21	10	27	42	28
	Post-infectious	1	2	2	1	4	4
Gonorrhea:	Civilian	19,656	21,045	18,832	56,659	58,173	52,402
	Military	415	637	418	1,447	1,864	1,531
Hepatitis:	Type A	372	528	528	985	1,246	1,331
	Type B	328	324	282	825	909	802
	Non A, Non B	14	N	N	42	N	N
	Unspecified	143	234	172	449	554	468
Legionellosis		4	N	N	8	N	N
Leprosy		1	1	1	1	7	6
Malaria		17	23	10	31	77	26
Measles (rubeola)		10	24	157	27	88	356
Meningococcal infections:	Total	55	96	49	141	198	131
	Civilian	55	95	49	141	197	131
	Military	–	1	–	–	1	–
Mumps		80	129	269	192	272	632
Pertussis		6	13	17	24	34	46
Rubella(German measles)		39	50	104	91	117	246
Syphilis (Primary & Secondary):	Civilian	694	582	489	1,817	1,717	1,351
	Military	7	7	7	25	21	17
Tuberculosis		431	430	430	1,064	1,073	1,075
Tularemia		2	–	1	3	4	5
Typhoid fever		3	4	4	14	23	14
Typhus fever, tick-borne (RMSF)		–	–	–	5	4	2
Rabies, animal		79	100	52	224	268	139

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	–
Botulism (Wis. 1)	6	Paralytic	–
Cholera	1	Psittacosis (Calif. 1)	5
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus	1
Leptospirosis (Hawaii 2)	2	Trichinosis	3
Plague (Ariz. 1)	1	Typhus fever, flea-borne (endemic, murine)	–

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 23, 1982 and January 24, 1981 (3rd week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	92	3	27	1	56,659	58,173	372	328	14	163	4	1
NEW ENGLAND	2	–	–	–	1,246	1,544	9	10	–	18	–	–
Maine	–	–	–	–	80	73	–	1	–	–	–	–
N.H.	1	–	–	–	51	66	1	–	–	–	–	–
Vt.	–	–	–	–	34	32	3	–	–	2	–	–
Mass.	–	–	–	–	495	603	3	7	–	16	–	–
R.I.	1	–	–	–	79	75	1	1	–	–	–	–
Conn.	–	–	–	–	507	695	1	1	–	–	–	–
MID. ATLANTIC	6	–	6	–	6,088	5,588	29	36	2	13	–	–
Upstate N.Y.	2	–	3	–	808	505	8	17	2	2	–	–
N.Y. City	2	–	3	–	3,281	2,325	9	10	–	5	–	–
N.J.	1	–	–	–	719	1,099	12	9	–	6	–	–
Pa.	1	–	–	–	1,280	1,659	U	U	U	U	–	–
E.N. CENTRAL	13	–	8	–	7,529	8,905	67	38	1	15	1	–
Ohio	–	–	–	–	2,442	3,622	9	4	1	3	–	–
Ind.	11	–	4	–	1,463	804	28	15	–	12	1	–
Ill.	–	–	–	–	996	1,798	22	8	–	–	–	–
Mich.	1	–	3	–	1,965	1,876	5	10	–	–	–	–
Wis.	1	–	1	–	663	805	3	1	–	–	–	–
W.N. CENTRAL	12	–	–	–	2,528	3,104	18	22	2	4	3	–
Minn.	3	–	–	–	511	484	6	3	2	–	–	–
Iowa	1	–	–	–	244	293	1	5	–	–	3	–
Mo.	6	–	–	–	1,070	1,441	8	14	–	4	–	–
N. Dak.	1	–	–	–	30	35	–	–	–	–	–	–
S. Dak.	–	–	–	–	79	87	–	–	–	–	–	–
Nebr.	–	–	–	–	106	246	–	–	–	–	–	–
Kans.	1	–	–	–	488	518	3	–	–	–	–	–
S. ATLANTIC	8	–	1	–	15,314	14,305	38	70	2	18	–	–
Del.	–	–	–	–	236	270	2	1	–	–	–	–
Md.	1	–	1	–	2,044	1,409	4	7	–	1	–	–
D.C.	–	–	–	–	657	881	1	1	–	–	–	–
Va.	–	–	–	–	1,148	1,524	3	11	1	6	–	–
W. Va.	1	–	–	–	140	182	1	2	–	1	–	–
N.C.	–	–	–	–	2,740	2,450	3	8	–	4	–	–
S.C.	–	–	–	–	962	1,261	7	19	–	2	–	–
Ga.	–	–	–	–	2,917	3,128	7	9	–	2	–	–
Fla.	6	–	–	–	4,470	3,200	10	12	1	2	–	–
E.S. CENTRAL	12	–	2	–	4,246	4,676	13	17	4	4	–	–
Ky.	–	–	–	–	605	616	1	–	–	–	–	–
Tenn.	1	–	1	–	1,605	1,679	9	7	1	–	–	–
Ala.	11	–	1	–	1,141	1,365	3	10	3	4	–	–
Miss.	–	–	–	–	895	1,016	–	–	–	–	–	–
W.S. CENTRAL	5	–	1	–	9,075	9,635	51	23	–	16	–	–
Ark.	–	–	–	–	936	584	–	1	–	1	–	–
La.	1	–	–	–	1,169	1,316	5	1	–	–	–	–
Okla.	2	–	–	–	859	889	7	4	–	1	–	–
Tex.	2	–	1	–	6,111	6,846	39	17	–	14	–	–
MOUNTAIN	1	–	2	1	2,046	2,040	60	11	2	19	–	–
Mont.	–	–	–	–	104	71	1	–	–	–	–	–
Idaho	–	–	–	–	67	61	–	–	–	–	–	–
Wyo.	–	–	–	–	72	56	1	–	–	–	–	–
Colo.	1	–	–	1	581	676	22	1	–	–	–	–
N. Mex.	–	–	–	–	250	264	9	1	1	–	–	–
Ariz.	–	–	–	–	602	498	19	4	–	13	–	–
Utah	–	–	–	–	83	89	2	1	1	1	–	–
Nev.	–	–	2	–	287	325	6	4	–	5	–	–
PACIFIC	33	3	7	–	8,587	8,376	87	101	1	56	–	1
Wash.	–	–	1	–	716	713	10	13	–	6	–	–
Oreg.	–	–	–	–	515	545	5	5	1	1	–	–
Calif.	21	3	6	–	6,956	6,739	68	78	–	48	–	1
Alaska	1	–	–	–	241	192	1	–	–	–	–	–
Hawaii	11	–	–	–	159	187	3	5	–	1	–	–
Guam	U	–	–	–	–	18	U	U	U	U	U	–
P.R.	2	–	–	–	86	171	–	–	–	3	–	–
V.I.	–	–	–	–	12	–	–	2	–	–	–	–
Pac. Trust Terr.	U	–	–	–	–	34	U	U	U	U	U	–

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 23, 1982 and January 24, 1981 (3rd week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	17	31	10	27	88	55	141	80	192	6	39	91	117
NEW ENGLAND	1	1	-	2	3	1	8	8	18	-	2	5	23
Maine	-	-	-	-	-	1	2	2	4	-	-	-	12
N.H.	-	-	-	1	1	-	3	1	3	-	1	4	10
Vt.	-	-	-	1	1	-	1	-	1	-	-	-	-
Mass.	1	1	-	-	-	-	-	2	7	-	1	1	1
R.I.	-	-	-	-	-	-	1	1	1	-	-	-	-
Conn.	-	-	-	-	1	-	1	2	2	-	-	-	-
MID. ATLANTIC	1	2	6	10	27	6	18	7	14	2	2	3	28
Upstate N.Y.	-	-	2	5	17	3	4	1	4	1	-	1	11
N.Y. City	1	2	4	4	2	1	5	3	4	1	2	2	4
N.J.	-	-	-	-	5	2	7	1	2	-	-	-	11
Pa.	-	-	-	1	3	-	2	2	4	-	-	-	2
E.N. CENTRAL	3	4	-	-	4	5	9	21	69	2	6	9	19
Ohio	-	-	-	-	-	3	3	9	33	1	-	-	-
Ind.	-	-	-	-	-	-	-	1	6	-	1	1	10
Ill.	-	-	-	-	-	-	-	2	4	1	5	5	2
Mich.	2	3	-	-	4	2	6	5	20	-	-	1	3
Wis.	1	1	-	-	-	-	-	4	6	-	-	2	4
W.N. CENTRAL	-	-	-	-	-	3	8	4	12	-	2	4	5
Minn.	-	-	-	-	-	-	3	-	-	-	-	1	-
Iowa	-	-	-	-	-	-	1	1	3	-	-	-	-
Mo.	-	-	-	-	-	3	4	-	2	-	2	2	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	3	7	-	-	1	5
S. ATLANTIC	1	3	-	6	11	19	32	20	30	1	2	6	7
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	-	-	-	-	-	-	1	-	1	-	-	-	-
D.C.	1	1	-	-	-	-	-	-	-	-	-	-	-
Va.	-	1	-	6	-	1	3	2	3	-	2	6	-
W. Va.	-	-	-	-	2	-	1	14	21	-	-	-	5
N.C.	-	-	-	-	-	3	3	2	2	-	-	-	2
S.C.	-	1	-	-	-	2	5	1	2	-	-	-	-
Ga.	-	-	-	-	6	9	13	-	-	-	-	-	-
Fla.	-	-	-	-	3	4	6	1	1	1	-	-	-
E.S. CENTRAL	-	-	-	1	-	4	11	1	2	-	-	3	2
Ky.	-	-	-	-	-	-	1	-	1	-	-	3	2
Tenn.	-	-	-	1	-	2	5	1	1	-	-	-	-
Ala.	-	-	-	-	-	2	5	-	-	-	-	-	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. CENTRAL	-	-	-	-	3	5	16	3	6	-	4	10	6
Ark.	-	-	-	-	-	-	-	-	1	-	-	-	-
La.	-	-	-	-	-	1	3	-	-	-	-	-	-
Okla.	-	-	-	-	-	1	1	-	-	-	-	-	-
Tex.	-	-	-	-	3	3	12	3	5	-	4	10	6
MOUNTAIN	-	1	-	-	4	5	10	1	4	-	-	2	-
Mont.	-	-	-	-	-	-	1	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	1	2	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	1	-
Colo.	-	1	-	-	-	2	3	-	-	-	-	-	-
N. Mex.	-	-	-	-	-	-	1	-	-	-	-	-	-
Ariz.	-	-	-	-	-	1	2	-	1	-	-	-	-
Utah	-	-	-	-	-	-	1	-	1	-	-	1	-
Nev.	-	-	-	-	4	2	2	-	-	-	-	-	-
PACIFIC	11	20	4	8	36	7	29	15	37	1	21	49	27
Wash.	-	1	-	-	-	1	4	1	9	-	-	1	4
Oreg.	2	2	-	-	-	-	7	-	-	-	-	-	-
Calif.	9	17	4	7	36	6	17	14	28	1	21	47	23
Alaska	-	-	-	-	-	-	1	-	-	-	-	-	-
Hawaii	-	-	-	1	-	-	-	-	-	-	-	1	-
Guam	U	-	U	-	2	U	-	U	-	U	U	-	-
P.R.	-	-	1	1	3	-	-	2	2	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	-

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 23, 1982 and January 24, 1981 (3rd week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	1,817	1,717	431	1,064	3	3	14	-	5	224
NEW ENGLAND	32	36	21	30	-	-	-	-	-	3
Maine	-	1	-	1	-	-	-	-	-	3
N.H.	-	-	2	2	-	-	-	-	-	-
Vt.	-	-	1	3	-	-	-	-	-	-
Mass.	22	24	15	16	-	-	-	-	-	-
R.I.	2	1	3	6	-	-	-	-	-	-
Conn.	8	10	-	2	-	-	-	-	-	-
MID. ATLANTIC	267	254	63	138	-	1	2	-	-	-
Upstate N.Y.	16	25	-	20	-	-	1	-	-	-
N.Y. City	190	151	24	74	-	1	1	-	-	-
N.J.	22	29	-	-	-	-	-	-	-	-
Pa.	37	49	39	44	-	-	-	-	-	-
E.N. CENTRAL	71	133	85	174	-	1	1	-	-	20
Ohio	14	28	19	50	-	-	-	-	-	1
Ind.	17	7	3	17	-	-	-	-	-	2
Ill.	20	79	25	61	-	-	-	-	-	7
Mich.	13	9	34	34	-	1	1	-	-	-
Wis.	7	10	4	12	-	-	-	-	-	10
W.N. CENTRAL	43	27	9	14	3	-	-	-	-	81
Minn.	10	5	-	-	-	-	-	-	-	18
Iowa	1	-	2	3	-	-	-	-	-	28
Mo.	28	17	3	4	2	-	-	-	-	9
N. Dak.	1	-	1	1	-	-	-	-	-	11
S. Dak.	-	-	1	2	-	-	-	-	-	-
Nebr.	-	2	-	-	-	-	-	-	-	10
Kans.	3	3	2	4	1	-	-	-	-	5
S. ATLANTIC	495	389	89	219	-	-	1	-	2	35
Del.	2	1	-	1	-	-	-	-	-	-
Md.	31	32	18	43	-	-	-	-	-	2
D.C.	32	44	5	11	-	-	-	-	-	-
Va.	34	24	2	7	-	-	1	-	-	12
W. Va.	2	-	2	6	-	-	-	-	-	2
N.C.	45	39	18	33	-	-	-	-	2	-
S.C.	25	26	7	24	-	-	-	-	-	3
Ga.	102	102	8	45	-	-	-	-	-	14
Fla.	222	121	29	49	-	-	-	-	-	2
E.S. CENTRAL	138	146	49	104	-	1	1	-	2	15
Ky.	8	8	15	28	-	-	-	-	-	3
Tenn.	20	47	8	32	-	1	1	-	-	8
Ala.	51	51	26	44	-	-	-	-	2	4
Miss.	59	40	-	-	-	-	-	-	-	-
W.S. CENTRAL	532	437	22	57	-	-	1	-	-	28
Ark.	11	6	-	-	-	-	-	-	-	7
La.	60	76	-	2	-	-	-	-	-	-
Okla.	12	12	11	16	-	-	1	-	-	7
Tex.	449	343	11	39	-	-	-	-	-	14
MOUNTAIN	33	31	14	31	-	-	-	-	-	3
Mont.	-	-	1	1	-	-	-	-	-	1
Idaho	1	-	-	-	-	-	-	-	-	-
Wyo.	1	1	-	-	-	-	-	-	-	1
Colo.	15	12	2	8	-	-	-	-	-	-
N. Mex.	4	7	2	5	-	-	-	-	-	-
Ariz.	1	-	6	14	-	-	-	-	-	1
Utah	2	-	-	-	-	-	-	-	-	-
Nev.	9	11	3	3	-	-	-	-	-	-
PACIFIC	206	264	79	297	-	-	8	-	1	39
Wash.	-	6	7	8	-	-	-	-	-	-
Oreg.	8	8	-	6	-	-	-	-	-	-
Calif.	193	241	69	275	-	-	8	-	1	35
Alaska	1	1	-	-	-	-	-	-	-	4
Hawaii	4	8	3	8	-	-	-	-	-	-
Guam	-	-	U	-	-	U	-	U	-	-
P.R.	-	15	-	-	-	-	-	-	-	-
V.I.	-	-	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	-	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 23,1982 (3rd week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	849	608	169	35	12	25	77
Boston, Mass.	206	133	49	14	1	9	29
Bridgeport, Conn.	55	44	9	–	1	1	3
Cambridge, Mass.	28	26	2	–	–	–	7
Fall River, Mass.	42	34	7	–	1	–	2
Hartford, Conn.	86	58	21	3	1	3	6
Lowell, Mass.	31	24	5	1	1	–	2
Lynn, Mass.	32	23	6	3	–	–	–
New Bedford, Mass.	34	28	6	–	–	–	3
New Haven, Conn.	62	40	11	5	2	4	4
Providence, R.I.	84	59	14	4	3	4	7
Somerville, Mass.	7	4	3	–	–	–	1
Springfield, Mass.	56	42	10	2	1	1	5
Waterbury, Conn.	46	35	10	–	–	1	2
Worcester, Mass.	80	58	16	3	1	2	6
MID. ATLANTIC	2,856	1,879	638	175	62	102	115
Albany, N.Y.	62	46	16	–	–	–	6
Allentown, Pa.	17	14	3	–	–	–	–
Buffalo, N.Y.	150	101	31	11	2	5	11
Camden, N.J.	50	23	17	1	1	8	2
Elizabeth, N.J.	34	25	7	2	–	–	2
Erie, Pa.†	32	22	8	1	1	–	2
Jersey City, N.J.	50	36	11	1	–	2	–
N.Y. City, N.Y.	1,569	1,027	340	118	33	51	47
Newark, N.J.	58	21	15	5	4	13	8
Paterson, N.J.§	31	27	–	2	–	2	–
Philadelphia, Pa.†	280	155	80	17	15	13	17
Pittsburgh, Pa.†	78	49	23	4	1	1	4
Reading, Pa.	40	37	3	–	–	–	4
Rochester, N.Y.	149	111	30	5	2	1	6
Schenectady, N.Y.	21	20	1	–	–	–	–
Scranton, Pa.†	32	24	8	–	–	–	1
Syracuse, N.Y.	105	67	27	4	2	5	1
Trenton, N.J.	31	22	6	2	–	1	1
Utica, N.Y.	35	25	8	1	1	–	2
Yonkers, N.Y.	32	27	4	1	–	–	1
E.N. CENTRAL	2,547	1,623	628	142	73	81	56
Akron, Ohio	67	43	18	4	1	1	–
Canton, Ohio	49	35	11	1	2	–	3
Chicago, Ill.	625	368	166	40	29	22	9
Cincinnati, Ohio	166	103	45	7	6	5	9
Cleveland, Ohio	232	142	61	15	3	11	1
Columbus, Ohio	137	82	32	10	8	5	3
Dayton, Ohio	113	78	27	4	2	2	2
Detroit, Mich.	285	166	80	26	5	8	4
Evansville, Ind.	46	37	8	1	–	–	–
Fort Wayne, Ind.	54	37	11	4	–	2	–
Gary, Ind.	13	6	4	2	1	–	–
Grand Rapids, Mich.	52	34	11	2	2	3	2
Indianapolis, Ind.	176	108	48	9	4	7	2
Madison, Wis.	36	25	8	1	–	2	5
Milwaukee, Wis.	143	98	28	6	3	8	2
Peoria, Ill.	34	26	5	3	–	–	5
Rockford, Ill.	53	39	11	–	2	1	8
South Bend, Ind.	54	40	12	1	1	–	1
Toledo, Ohio	139	108	21	6	2	2	–
Youngstown, Ohio	73	48	21	–	2	2	–
W.N. CENTRAL	797	531	181	35	21	29	40
Des Moines, Iowa	94	69	15	4	2	4	2
Duluth, Minn.	38	28	8	1	1	–	5
Kansas City, Kans.	36	24	5	4	1	2	–
Kansas City, Mo.	121	81	33	1	2	4	10
Lincoln, Nebr.	41	31	8	1	1	–	3
Minneapolis, Minn.	108	73	24	4	3	4	3
Omaha, Nebr.	81	56	17	4	1	3	5
St. Louis, Mo.	148	88	38	8	5	9	6
St. Paul, Minn.	68	51	11	4	1	1	1
Wichita, Kans.	62	30	22	4	4	2	5
S. ATLANTIC	1,194	720	309	70	44	52	65
Atlanta, Ga.	159	100	43	6	2	8	5
Baltimore, Md.	229	135	57	19	6	12	–
Charlotte, N.C.	83	39	26	8	6	3	5
Jacksonville, Fla.	116	76	27	1	7	5	4
Miami, Fla.	120	66	43	8	2	1	4
Norfolk, Va.	61	35	15	5	2	4	5
Richmond, Va.	64	33	21	3	4	3	12
Savannah, Ga.	46	23	16	2	2	3	2
St. Petersburg, Fla.	102	84	12	2	1	3	11
Tampa, Fla.	78	51	19	3	2	3	10
Washington, D.C.	105	57	23	12	7	6	6
Wilmington, Del.	33	21	7	1	3	1	1
E.S. CENTRAL	801	487	200	56	32	26	46
Birmingham, Ala.	129	72	35	7	10	5	3
Chattanooga, Tenn.	59	39	8	8	3	1	4
Knoxville, Tenn.	37	26	5	1	4	1	–
Louisville, Ky.	117	67	35	6	3	6	14
Memphis, Tenn.	177	103	51	15	6	2	10
Mobile, Ala.	94	60	20	9	2	3	4
Montgomery, Ala.	55	35	16	2	1	1	3
Nashville, Tenn.	133	85	30	8	3	7	8
W.S. CENTRAL	1,398	846	346	105	52	49	64
Austin, Tex.	50	32	8	4	1	5	1
Baton Rouge, La.	60	33	20	3	3	1	2
Corpus Christi, Tex.	64	44	11	2	5	2	2
Dallas, Tex.	212	113	62	19	10	8	3
El Paso, Tex.	60	44	10	1	2	3	9
Fort Worth, Tex.	134	77	32	10	3	12	12
Houston, Tex.	231	122	62	30	13	4	5
Little Rock, Ark.	88	51	29	5	1	2	10
New Orleans, La.	150	95	36	13	3	3	3
San Antonio, Tex.	204	138	46	8	5	7	10
Shreveport, La.	33	22	9	2	–	–	–
Tulsa, Okla.	112	75	21	8	6	2	7
MOUNTAIN	630	381	172	39	15	23	37
Albuquerque, N.Mex.	58	39	12	5	1	1	2
Colo. Springs, Colo.	37	23	11	2	–	1	8
Denver, Colo.	134	80	40	7	2	5	5
Las Vegas, Nev.	70	38	22	7	2	1	4
Ogden, Utah	29	16	10	1	1	1	2
Phoenix, Ariz.	101	62	25	4	4	6	3
Pueblo, Colo.	30	21	6	1	1	1	2
Salt Lake City, Utah	56	28	14	7	2	3	2
Tucson, Ariz.	115	74	32	5	2	2	9
PACIFIC	2,341	1,598	447	149	72	74	108
Berkeley, Calif.	19	13	5	1	–	–	2
Fresno, Calif.	84	53	17	9	4	1	4
Glendale, Calif.	47	35	8	1	–	3	3
Honolulu, Hawaii	59	41	14	3	–	1	5
Long Beach, Calif.	108	80	16	8	1	3	2
Los Angeles, Calif.	887	576	177	60	35	39	26
Oakland, Calif.	108	73	27	4	1	2	10
Pasadena, Calif.	30	23	4	–	1	2	2
Portland, Oreg.	121	92	18	4	5	2	5
Sacramento, Calif.	94	72	11	5	3	3	6
San Diego, Calif.	141	93	35	11	1	1	6
San Francisco, Calif.	182	123	37	14	4	4	4
San Jose, Calif.	184	129	29	12	9	5	16
Seattle, Wash.	163	111	36	10	4	2	9
Spokane, Wash.	69	47	9	6	4	3	5
Tacoma, Wash.	45	37	4	1	–	3	3
TOTAL	13,415††	8,673	3,090	806	383	461	608

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Poliomyelitis Prevention — Continued

Children Incompletely Immunized

Polio vaccination status should be reevaluated periodically, and those who are inadequately protected should complete their immunizations.

OPV: To help assure seroconversion to all 3 serotypes of poliovirus, completion of the primary series of 3 doses of OPV is recommended. Time intervals between doses longer than those recommended for routine primary immunization do not necessitate additional doses of vaccine. Individuals who received only 1 dose of each of the monovalent OPVs in the past should receive 2 doses of trivalent OPV at least 6 weeks apart. One dose of each monovalent OPV (poliovirus types 1, 2, and 3) is at least equivalent to 1 dose of trivalent OPV.

IPV: Regulations for vaccine licensure adopted since 1968 require a higher potency IPV than was previously manufactured. Four doses of IPV administered after 1968 are considered a complete primary series. As with OPV, time intervals between doses longer than those recommended for routine primary immunization do not necessitate additional doses.

Incompletely immunized children who are at increased risk of exposure to poliovirus (as noted below under **RECOMMENDATIONS FOR ADULTS**) should be given the remaining required dose or, if time is a limiting factor, at least a single dose of OPV.

RECOMMENDATIONS FOR ADULTS

Routine primary poliovirus vaccination of adults (generally those 18 years old or older) residing in the United States is not necessary. Most adults are already immune and also have a very small risk of exposure to poliomyelitis in the United States. Immunization is recommended for certain adults who are at greater risk of exposure to wild polioviruses than the general population, including:

1. travelers to areas or countries where poliomyelitis is epidemic or endemic;
2. members of communities or specific population groups with disease caused by wild polioviruses;
3. laboratory workers handling specimens which may contain polioviruses;
4. health-care workers in close contact with patients who may be excreting polioviruses.

For individuals in the above categories, polio vaccination is recommended as detailed below.

Unvaccinated Adults

For adults at increased risk of exposure to poliomyelitis, primary immunization with IPV is recommended whenever this is feasible. IPV is preferred because the risk of vaccine-associated paralysis following OPV is slightly higher in adults than in children. Three doses should be given at intervals of 1-2 months; a fourth dose should follow 6-12 months after the third.

In circumstances where time will not allow at least 3 doses of IPV to be given before protection is required, the following alternatives are recommended:

1. If less than 8, but more than 4, weeks are available before protection is needed, 2 doses of IPV should be given at least 4 weeks apart.
2. If less than 4 weeks are available before protection is needed, a single dose of OPV is recommended.

In both instances, the remaining doses of vaccine should be given later at the recommended intervals, if the person remains at increased risk.

Incompletely Immunized Adults

Adults who are at increased risk of exposure to poliomyelitis and who have previously re-

Poliomyelitis Prevention — Continued

ceived less than a full primary course of OPV or IPV should be given the remaining required doses of either vaccine, regardless of the interval since the last dose and the type of vaccine previously received.

Adults Previously Given a Complete Primary Course of OPV or IPV

Adults who are at increased risk of exposure to poliomyelitis and who have previously completed a primary course of OPV may be given another dose of OPV. The need for further supplementary doses has not been established. Those adults who previously completed a primary course of IPV may be given a dose of either IPV or OPV. If IPV is used exclusively, additional doses may be given every 5 years, but their need also has not been established.

UNIMMUNIZED OR INADEQUATELY IMMUNIZED ADULTS IN HOUSEHOLDS IN WHICH CHILDREN ARE TO BE GIVEN OPV

Adults who have not been adequately immunized against poliomyelitis with OPV or IPV are at a very small risk of developing OPV-associated paralytic poliomyelitis when children in the household are given OPV. About 4 such cases have occurred annually among contacts since 1969, during which time about 24 million doses of OPV were distributed yearly. (See **ADVERSE REACTIONS**.)

Because of the overriding importance of ensuring prompt and complete immunization of the child and the extreme rarity of OPV-associated disease in contacts, the Committee recommends the administration of OPV to a child regardless of the poliovirus-vaccine status of adult household contacts. This is the usual practice in the United States. The responsible adult should be informed of the small risk involved. An acceptable alternative, if there is strong assurance that ultimate, full immunization of the child will not be jeopardized or unduly delayed, is to immunize adults according to the schedule outlined above before giving OPV to the child.

PRECAUTIONS AND CONTRAINDICATIONS

Pregnancy

Although there is no convincing evidence documenting adverse effects of either OPV or IPV on the pregnant woman or developing fetus, it is prudent on theoretical grounds to avoid vaccinating pregnant women. However, if immediate protection against poliomyelitis is needed, OPV is recommended.

Immunodeficiency

Patients with immune-deficiency diseases, such as combined immunodeficiency, hypogammaglobulinemia and agammaglobulinemia, should not be given OPV because of their substantially increased risk of vaccine-associated disease. Furthermore, patients with altered immune states due to diseases such as leukemia, lymphoma, or generalized malignancy, or with immune systems compromised by therapy with corticosteroids, alkylating drugs, antimetabolites, or radiation should not receive OPV because of the theoretical risk of paralytic disease. OPV should not be used for immunizing immunodeficient patients and their household contacts; IPV is recommended. Many immunosuppressed patients will be immune to polioviruses by virtue of previous immunization or exposure to wild-type virus at a time when they were immunologically competent. Although these persons should not receive OPV, their risk of paralytic disease is thought to be less than that of naturally immunodeficient individuals. Although a protective immune response to IPV in the immunodeficient patient cannot be assured, the vaccine is safe and some protection may result from its administration. If OPV is

Poliomyelitis Prevention – Continued

inadvertently administered to a household-type contact of an immunodeficient patient, close contact between the patient and the recipient of OPV should be avoided for approximately 1 month after vaccination. This is the period of maximum excretion of vaccine virus. Because of the possibility of immunodeficiency in other children born to a family in which there has been 1 such case, OPV should not be given to a member of a household in which there is a family history of immunodeficiency until the immune status of the recipient and other children in the family is documented.

ADVERSE REACTIONS

OPV

In rare instances, administration of OPV has been associated with paralysis in healthy recipients and their contacts. Other than efforts to identify persons with immune-deficiency conditions, no procedures are currently available for identifying persons likely to experience such adverse reactions. Although the risk of vaccine-associated paralysis is extremely small for vaccinees and their susceptible, close, personal contacts, they should be informed of this risk.

IPV

No serious side effects of currently available IPV have been documented. Since IPV contains trace amounts of streptomycin and neomycin, there is a possibility of hypersensitivity reactions in individuals sensitive to these antibiotics.

CASE INVESTIGATION AND EPIDEMIC CONTROL

Each suspected case of poliomyelitis should prompt an immediate epidemiologic investigation, including an active search for other cases. If evidence implicates wild poliovirus and there is a possibility of transmission, a vaccination plan designed to contain spread should be developed. If evidence implicates vaccine-derived poliovirus, no vaccination plan need be developed, as no outbreaks associated with vaccine virus have been documented to date. Within an epidemic area, OPV should be provided for all persons over 6 weeks of age who have not been completely immunized or whose immunization status is unknown, with the exceptions noted above under **Immunodeficiency.**

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Erratum, Vol. 31, Nos. 1 & 2

p16. In the article "Measles, United States—Weeks 49-52, 1981," the following sentence should be deleted: "The latter patient's measles-immunity status had not been assessed before arrival in the United States." This sentence should be replaced by: "This patient had been vaccinated against measles 4 years before entering the United States."

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31/4

CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

February 5, 1982 / Vol. 31 / No. 4

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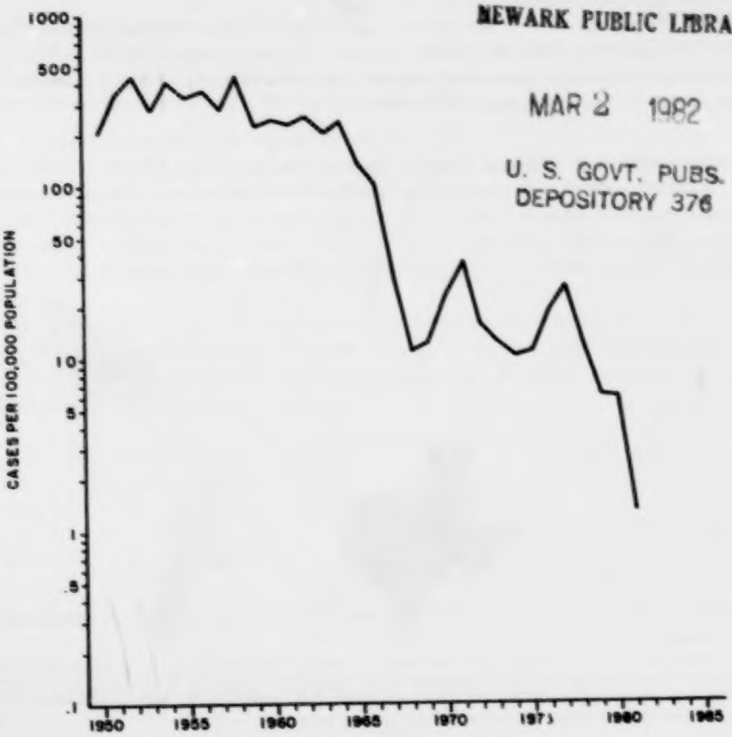
Epidemiologic Notes and Reports

Measles — United States, 1981

Reported measles in the United States reached a record low in 1981 when a provisional total of 3,032 measles cases were reported (1.3 cases/100,000 population of all ages). This is a 99.4% reduction from the 1950-1962 prevaccine era when an annual average of 525,730 cases were reported (315.2 cases/100,000 population) (Figure 1).

FIGURE 1. Incidence of reported measles, United States, 1950-1981



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Measles — Continued

There was only a mild seasonal increase in reported measles cases during the spring of 1981. Record lows were set during 47 of the 52 reporting weeks. Except for a 7-week period in the spring, fewer than 100 cases were reported each week. Moreover, fewer than 50 cases per week were reported for 31 of the weeks. During week 35, ending September 5, only 5 cases were reported—a record low for any week of any year.

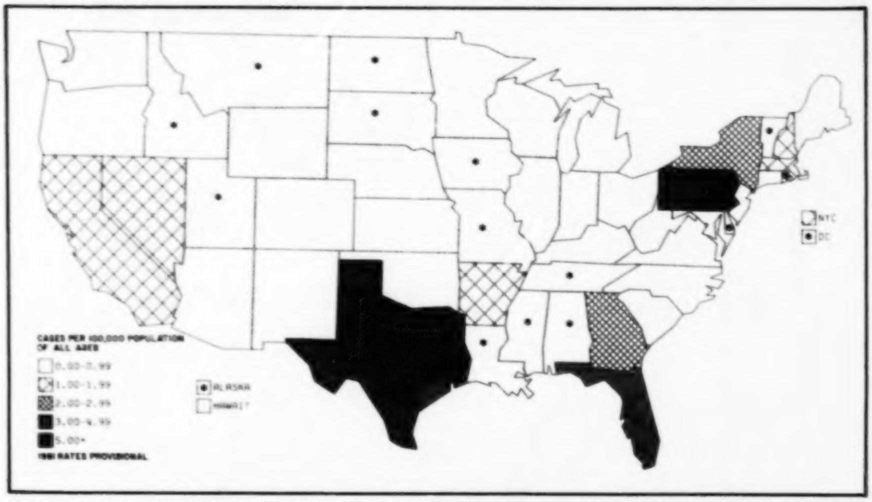
Most reporting areas reported very few cases in 1981. Forty-four states and the District of Columbia reported <100 cases, and 33 states and the District of Columbia reported <10 cases in 1981. Sixteen reporting areas had no indigenous measles transmission at all in 1981 (Figure 2). These included 8 states (Alaska, Delaware, Mississippi, Montana, North Dakota, Rhode Island, South Dakota, and Utah) that reported no measles cases. In 5 reporting areas (Alabama, District of Columbia, Idaho, Iowa, and Vermont) all cases were foreign importations or could be linked within 2 generations of the disease to those importations. In 2 states (Missouri and Tennessee) all cases were out-of-state introductions or could be linked within 2 generations of the disease to those introductions. Finally, 1 state (Louisiana) had both foreign importations and out-of-state introductions as the source of all its cases.

Measles incidence by state was also very low (Figure 2). Forty-one reporting areas had an incidence of <1 case/100,000 total population. Only 2 reporting areas (Texas and Pennsylvania) had incidences of >5 cases/100,000 total population.

Forty-six states and the District of Columbia each had at least 1 period of 4 consecutive weeks free of reported measles in 1981.

In 1981, only 317 (10.1%) of the nation's 3,144 counties reported any measles (Figure 3). Only 53 (1.7%) counties reported measles during 5 or more weeks; only 26 (0.8%) reported measles during 10 or more weeks. In any given week, a maximum of 45 (1.4%) counties and a minimum of 6 (0.2%) counties reported measles.

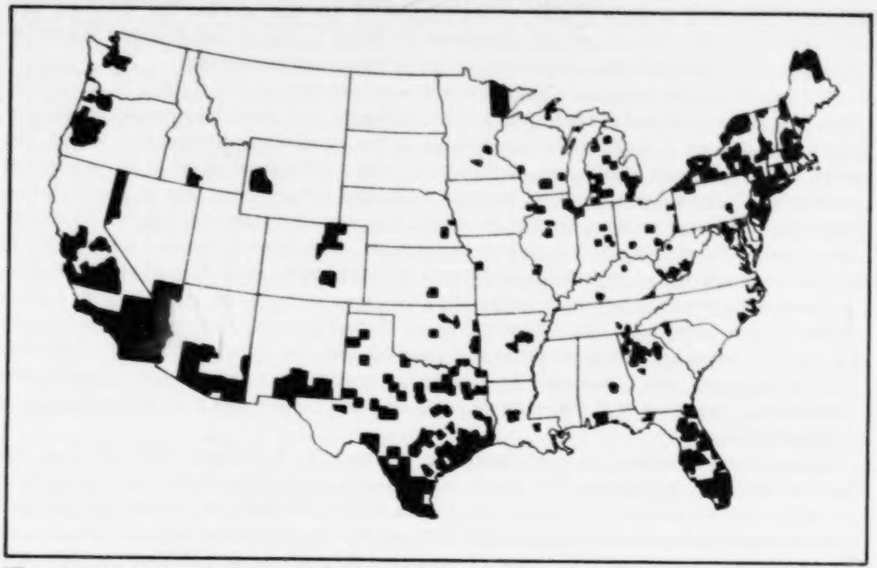
FIGURE 2. Incidence of reported measles, by state, United States, 1981



*No indigenous transmission (either no cases reported or all cases linked within 2 generations of the disease to foreign importations or out-of-state introductions).

Measles – Continued

FIGURE 3. Counties* reporting measles, United States, 1981



*Two counties in Hawaii and none in Alaska reported measles.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: A nationwide program is in progress to eliminate indigenous measles from the United States by October 1982. The data presented above indicate that during the third year of the Measles Elimination Program, measles disease has been reduced to record low levels. Measles morbidity is only 0.6% of the prevaccine level. More than half the states reported <10 cases. Approximately one-third of the reporting areas had no indigenous measles transmission.

Ninety percent of the nation's counties reported no measles in 1981, and only 1.7% of the counties reported measles during 5 or more weeks. These data indicate that measles transmission is extremely limited within the United States and has already been successfully eliminated from most of the country.

Tularemia Associated with Domestic Cats — Georgia, New Mexico

Domestic cats are the presumed source of infection for 2 recently reported cases of tularemia. Both patients, 1 in Georgia and 1 in New Mexico, recovered following streptomycin therapy.

Tularemia – Continued

Georgia: On May 17, 1981, a 32-year-old man living in rural southeast Georgia had onset of fever and noted a papule on the dorsum of the right thumb. The following day, trimethoprim-sulfamethoxazole was prescribed. On May 21, therapy was changed to ampicillin because of a persistent fever that was thought to be caused by sinusitis.

The patient was hospitalized on May 26 with a temperature of 101 F (38.3 C). A necrotic, ulcerating lesion, with associated ascending lymphangitis, and tender lymphadenitis was present on the dorsum of his thumb. The remainder of the physical examination was normal. The white blood cell count (WBC) was 12,900/mm^3, with a differential count of 56 segmented neutrophils, 7 band forms, 24 lymphocytes, 4 atypical lymphocytes, and 9 monocytes. A Gram stain of lesion exudate, as well as aerobic and anaerobic bacterial cultures on routine media (which did not include the glucose-cysteine blood agar usually required for the growth of *Francisella tularensis*), revealed no organisms. A biopsy of the ulcer showed skin necrosis.

Because a consulting physician suggested a diagnosis of tularemia, streptomycin, 1 gram intramuscularly every 12 hours, was administered; 2 days later, the dose was lowered to 500 mg every 12 hours and continued for an additional 10 days. The patient recovered uneventfully. Tests of acute- and convalescent-phase serum specimens, using the tube agglutination technique for detection of *F. tularensis* antibody, revealed a rise in titer from 20 on May 29 to 2,560 on June 10.

In the 2 weeks before onset of the patient's illness, his 3 Siamese cats had fever and became anorectic and listless. The family veterinarian prescribed penicillin and streptomycin on May 8, and the patient treated the cats at home without receiving any injuries that he could recall. Despite therapy, 2 cats died on May 13, and the third, noted by the veterinarian to be icteric shortly before death, died May 17. Two cats were necropsied; the livers of both animals contained numerous discrete white spots <3 mm in diameter. On microscopic examination these foci, as well as others in the spleen, were found to be areas of acute inflammation containing coccobacillary organisms. The organisms were immunofluorescence-positive for *F. tularensis*, but cultures prepared after the tissues had been frozen were negative.

New Mexico: On May 13, 1981, a 31-year-old man living in Taos County who had been bitten by his pet cat 4 days earlier had onset of fever, rigors, myalgia, non-productive cough, pleuritic pain, and vomiting. When examined by a physician on May 17, the patient appeared acutely ill and had a temperature of 102.9 F (39.4 C). Skin lesions resembling insect bites were noted on several areas of his body. The WBC was 9,900/mm^3 with 64% neutrophils, 25% band forms, and 11% lymphocytes. Chest X ray revealed a left basilar infiltrate.

Tularemia was suspected, and streptomycin, 1 gram intramuscularly every 12 hours, was given as outpatient therapy and was continued for 9 days. The patient was clinically improved after 48 hours of treatment, but his fever persisted for 3 more days. Tests of acute- and convalescent-phase serum specimens, using the microagglutination technique for detection of *F. tularensis* antibody, revealed a rise in titer from <20 on May 19 to ≥640 on June 2.

On May 9, the patient had found his cat eating a dead rabbit under the bed. While removing the cat and rabbit from the house, the patient was bitten on the hand. On May 12, the cat became anorectic and listless; when examined that day by a veterinarian, it had a temperature of 105.1 F (40.6 C; normal temperature 100.5-102.5 F) but appeared normal otherwise. No therapy was given. The cat appeared healthy when examined again on May 19, and a serum specimen obtained at that time had an *F. tularensis* antibody titer of 160.

Reported by RM Packer III, MD, Waycross, LR Harrison, VMD, Veterinary Diagnostic Laboratory, University of Georgia, Tifton, CF Matthews, JT Holloway, MD, Director, District 9-2, RK Sikes, DVM, MPH, State Epidemiologist, Georgia Dept of Human Resources; AD Pond, MD, T Schupbach, DVM, Taos, C Hibbs, *Tularemia – Continued*

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Editorial Note: Cases of human tularemia associated with cats are uncommon. Humans may acquire the disease by the bite or scratch of a cat, which, though infected, may not show signs of clinical illness. Bite transmission is more commonly reported and probably reflects the presence of the organism in the mouths of cats after they have eaten or mouthed infected animals, usually rodents or rabbits. However, in the absence of a known scratch, bite, or break in the patient's skin, exposure to a cat with an ulcer has also been reported as a source of infection (*1*). While *F. tularensis* has been reported to penetrate unbroken skin of guinea pigs and mice (*2*), it seems plausible that the organism enters through minute abrasions on the skin. This is the most likely route of infection in the Georgia case, where there was no history of a bite or scratch. Although lymphangitis was noted in this case, involvement of the regional lymphatic vessels is rare in tularemia and usually manifests as firm, nontender nodules (*3*).

Cutaneous inoculation of *F. tularensis* most commonly results in ulceroglandular tularemia. The New Mexico case, however, appears to have been typhoidal tularemia with secondary pneumonia, which is most likely to occur with this form of tularemia. Typhoidal tularemia is uncommon, accounting for only 6.2% of the cases in a study of 225 tularemia patients (*3*). Patients with typhoidal tularemia appear ill with a systemic, febrile illness but have no localizing physical findings. Thus, diagnosis of this form of tularemia is difficult.

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Current Trends

Influenza Update – United States

A total of 10 states have reported isolations of influenza type B this season, and 4 states have reported influenza A(H1N1) isolations (*1-3*). Tucson, Arizona, was the only locality reporting isolates with concurrent widespread respiratory illness.

In Tucson, 21 influenza B isolates from patients with respiratory illness were obtained in the period December 26, 1981-January 29, 1982, by the virology laboratory of the University of Arizona hospital. The ages of these patients ranged from 1 to 69 years. The low median age, 17 months, reflects the predominantly young age group attending clinical centers that submitted specimens for diagnosis to the laboratory. Increased school absenteeism, averaging 15% among elementary and junior high students, has been noted in many schools in the middle section of the city. Influenza type B virus has now been identified in each of 4 specimens collected during the week of January 17 from children with influenza-like illness who at-

Influenza — Continued

tended a neighborhood school in this section. There is no evidence of widespread respiratory illness among adults in Tucson.

Other communities in the United States have reported only sporadic cases of influenza this season. Since mid January, 3 states—Arkansas, Colorado, and Wisconsin—have reported their first isolations of influenza B for the season. All 3 isolates were from young adults who had typical influenza illnesses. The patients from Colorado and Wisconsin had not traveled recently, but the Arkansas patient had onset of illness 1 day after returning from a trip to San Diego, California, and Honolulu, Hawaii.

Reported by R Worrell, RN, B Porter, MS, P Noland, MD, Pima County Health Dept, L Minnich, MS, G Ray, MD, University Hospital, Tucson, JJ Sacks, MD, Acting State Epidemiologist, Arizona Dept of Health Svcs; E Moses, University of Arkansas, Little Rock, J Farrel, JP Lofgren, MD, State Epidemiologist, Arkansas Dept of Health; P Graves, G Meiklejohn, MD, University of Colorado Medical Center, R Hopkins, MD, State Epidemiologist, Colorado Dept of Health; D Nelson, H Bostrum, JP Davis, MD, State Epidemiologist, Wisconsin Dept of Health and Social Svcs; Immunization Div, Center for Prevention Svcs, Influenza Br, Viral Diseases Div, Center for Infectious Diseases, CDC.

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TABLE I. Summary — cases of specified notifiable diseases, United States

DISEASE		4th WEEK ENDING			CUMULATIVE, FIRST 4 WEEKS		
		January 30 1982	January 31 1981	MEDIAN 1977-1981	January 30 1982	January 31 1981	MEDIAN 1977-1981
Aseptic meningitis		62	95	57	321	280	219
Brucellosis		1	1	1	4	6	6
Encephalitis:	Primary (arthropod-borne & unspec.)	13	16	12	42	58	40
	Post-infectious	–	1	1	1	5	5
Gonorrhea:	Civilian	16,477	18,164	18,730	73,767	76,337	73,235
	Military	547	404	577	2,008	2,268	2,203
Hepatitis:	Type A	393	413	545	1,390	1,659	1,874
	Type B	334	334	312	1,211	1,243	1,114
	Non A, Non B	30	N	N	72	N	N
	Unspecified	156	201	196	615	755	657
Legionellosis		8	N	N	16	N	N
Leprosy		1	3	3	2	10	8
Malaria		10	13	12	44	90	38
Measles (rubeola)		9	38	192	36	126	469
Meningococcal infections:	Total	69	105	69	212	303	201
	Civilian	68	105	69	211	302	200
	Military	1	–	–	1	1	1
Mumps		91	96	307	287	368	935
Pertussis		22	13	23	47	47	65
Rubella (German measles)		13	50	134	104	167	380
Syphilis (Primary & Secondary):	Civilian	687	552	508	2,506	2,269	1,814
	Military	20	9	6	45	30	24
Tuberculosis		452	446	523	1,540	1,519	1,544
Tularemia		1	5	1	4	9	9
Typhoid fever		17	6	6	32	29	19
Typhus fever, tick-borne (RMSF)		2	2	1	11	6	4
Rabies, animal		71	106	57	295	374	190

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	–
Botulism (N.Y. City 1, Calif. 1)	8	Paralytic	–
Cholera	1	Psittacosis (Colo. 1)	6
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus (W.Va. 1, Ark. 1)	3
Leptospirosis (Calif. 1)	3	Trichinosis (Idaho 2)	5
Plague	1	Typhus fever, flea-borne (endemic, murine)	–

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 30, 1982 and January 31, 1981 (4th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	62	4	42	1	73,767	76,337	393	334	30	156	8	2
NEW ENGLAND	2	–	–	–	1,641	2,089	3	14	–	14	–	–
Maine	–	–	–	–	104	105	–	1	–	–	–	–
N.H.	1	–	–	–	71	82	–	1	–	–	–	–
Vt.	–	–	–	–	42	38	–	1	–	–	–	–
Mass.	–	–	–	–	646	806	2	4	–	14	–	–
R.I.	1	–	–	–	113	98	1	3	–	–	–	–
Conn.	–	–	–	–	665	960	–	4	–	–	–	–
MID. ATLANTIC	10	–	7	–	8,237	7,649	26	28	1	14	–	–
Upstate N.Y.	2	–	3	–	1,158	753	6	10	1	6	–	–
N.Y. City	4	–	3	–	4,131	3,175	8	8	–	5	–	–
N.J.	–	–	–	–	1,116	1,681	12	10	–	3	–	–
Pa.	4	–	1	–	1,832	2,040	–	–	–	–	–	–
E.N. CENTRAL	5	–	11	–	9,078	11,883	55	56	3	22	–	–
Ohio	–	–	1	–	2,795	4,237	9	10	1	6	–	–
Ind.	2	–	5	–	1,662	1,010	7	10	1	4	–	–
Ill.	–	–	–	–	1,242	2,984	23	8	1	1	–	–
Mich.	3	–	4	–	2,468	2,621	12	27	–	11	–	–
Wis.	–	–	1	–	911	1,031	4	1	–	–	–	–
W.N. CENTRAL	3	–	–	–	3,746	4,046	14	15	1	2	–	–
Minn.	1	–	–	–	622	603	5	4	–	1	–	–
Iowa	1	–	–	–	314	382	4	–	1	–	–	–
Mo.	1	–	–	–	1,725	1,887	4	9	–	1	–	–
N. Dak.	–	–	–	–	35	41	–	–	–	–	–	–
S. Dak.	–	–	–	–	99	101	1	–	–	–	–	–
Nebr.	–	–	–	–	198	295	–	2	–	–	–	–
Kans.	–	–	–	–	753	737	–	–	–	–	–	–
S. ATLANTIC	10	1	5	–	20,848	19,053	32	64	1	6	4	–
Del.	–	–	–	–	299	342	1	3	1	–	–	–
Md.	–	–	3	–	2,874	2,009	2	4	–	–	1	–
D.C.	–	–	–	–	875	1,263	1	8	–	–	–	–
Va.	2	1	1	–	1,599	1,962	5	5	–	–	3	–
W. Va.	2	–	–	–	199	249	5	1	–	–	–	–
N.C.	4	–	1	–	3,362	3,282	1	11	–	1	–	–
S.C.	–	–	–	–	1,575	1,727	2	6	–	2	–	–
Ga.	–	–	–	–	3,844	4,197	7	19	–	3	–	–
Fla.	2	–	–	–	6,221	4,022	8	7	–	–	–	–
E.S. CENTRAL	2	–	3	–	4,952	6,435	21	35	4	3	1	–
Ky.	–	–	–	–	768	859	10	5	2	1	–	–
Tenn.	1	–	2	–	1,869	2,359	5	20	1	–	–	–
Ala.	1	–	1	–	1,225	2,095	5	10	1	2	1	–
Miss.	–	–	–	–	1,090	1,122	1	–	–	–	–	–
W.S. CENTRAL	9	–	2	–	11,184	12,432	101	41	–	54	–	–
Ark.	–	–	–	–	967	776	4	1	–	2	–	–
La.	–	–	–	–	1,682	1,670	12	8	–	7	–	–
Okla.	1	–	1	–	1,112	1,127	6	4	–	3	–	–
Tex.	8	–	1	–	7,423	8,859	79	28	–	42	–	–
MOUNTAIN	2	–	2	1	2,619	2,643	38	12	5	13	2	–
Mont.	–	–	–	–	139	96	2	–	–	–	1	–
Idaho	–	–	–	–	86	129	3	1	–	–	1	–
Wyo.	–	–	–	–	82	74	1	–	–	–	–	–
Colo.	–	–	–	1	741	812	4	5	–	4	–	–
N. Mex.	1	–	–	–	332	321	4	1	1	3	–	–
Ariz.	1	–	–	–	707	666	18	3	1	4	–	–
Utah	–	–	–	–	117	141	4	2	–	2	–	–
Nev.	–	–	2	–	415	404	2	–	3	–	–	–
PACIFIC	19	3	12	–	11,462	10,107	103	69	15	28	1	2
Wash.	3	–	1	–	958	713	22	3	–	–	1	–
Oreg.	–	–	–	–	633	709	10	7	–	1	–	–
Calif.	11	3	11	–	9,365	8,166	69	56	13	27	–	2
Alaska	–	–	–	–	303	267	1	–	–	–	–	–
Hawaii	5	–	–	–	203	252	1	3	2	–	–	–
Guam	U	–	–	–	–	20	U	U	U	U	U	–
P.R.	–	–	–	–	137	204	–	–	–	2	–	–
V.I.	1	–	–	–	20	–	–	–	–	–	–	–
Pac. Trust Terr.	U	–	–	–	–	46	U	U	U	U	U	–

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 30, 1982 and January 31,1981 (4th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	10	44	9	36	126	69	212	91	287	22	13	104	167
NEW ENGLAND	1	2	1	3	5	2	10	6	24	1	1	6	34
Maine	–	–	–	–	–	–	2	3	7	–	–	–	17
N.H.	–	–	–	1	2	–	3	–	3	–	1	5	15
Vt.	–	–	1	2	1	–	1	2	3	–	–	–	–
Mass.	1	2	–	–	–	–	–	1	8	1	–	1	2
R.I.	–	–	–	–	–	–	1	–	1	–	–	–	–
Conn.	–	–	–	–	2	2	3	–	2	–	–	–	–
MID. ATLANTIC	–	2	3	13	41	9	27	4	10	3	–	3	36
Upstate N.Y.	–	–	3	8	21	2	6	2	6	–	–	1	15
N.Y. City	–	2	–	4	5	2	7	2	6	2	–	2	5
N.J.	–	–	–	–	5	4	11	–	2	–	–	–	14
Pa.	–	–	–	1	10	1	3	–	4	1	–	–	2
E.N. CENTRAL	1	5	–	–	4	7	16	48	117	10	4	13	33
Ohio	–	–	–	–	–	3	6	27	60	1	–	–	–
Ind.	–	–	–	–	–	–	–	–	6	–	–	1	13
Ill.	–	–	–	–	–	3	3	2	6	2	3	8	7
Mich.	1	4	–	–	4	1	7	16	36	2	–	1	5
Wis.	–	1	–	–	–	–	–	3	9	5	1	3	8
W.N. CENTRAL	1	1	–	–	–	3	11	2	14	2	1	5	5
Minn.	–	–	–	–	–	1	4	–	–	–	–	1	–
Iowa	–	–	–	–	–	–	1	2	5	–	–	–	–
Mo.	1	1	–	–	–	1	5	–	2	2	–	2	–
N. Dak.	–	–	–	–	–	1	1	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	–	–	–
Nebr.	–	–	–	–	–	–	–	–	–	–	–	–	–
Kans.	–	–	–	–	–	–	–	–	7	–	1	2	5
S. ATLANTIC	1	7	1	7	19	16	50	9	43	1	1	7	8
Del.	–	–	–	–	–	–	–	–	–	–	–	–	–
Md.	1	4	–	–	–	–	3	–	3	–	–	–	–
D.C.	–	1	–	–	–	–	–	–	–	–	–	–	–
Va.	–	1	1	7	–	1	4	1	4	–	–	6	–
W. Va.	–	–	–	–	2	–	1	4	25	–	–	–	6
N.C.	–	–	–	–	–	3	6	–	2	1	–	–	2
S.C.	–	1	–	–	–	2	7	–	2	–	–	–	–
Ga.	–	–	–	–	8	4	17	1	1	–	1	1	–
Fla.	–	–	–	–	9	6	12	3	6	–	–	–	–
E.S. CENTRAL	–	–	1	2	–	5	16	1	3	–	1	4	2
Ky.	–	–	1	1	–	–	1	–	1	–	1	4	2
Tenn.	–	–	–	1	–	2	7	–	1	–	–	–	–
Ala.	–	–	–	–	–	3	8	–	–	–	–	–	–
Miss.	–	–	–	–	–	–	–	1	1	–	–	–	–
W.S. CENTRAL	2	2	2	2	6	13	29	6	12	1	1	11	8
Ark.	–	–	–	–	–	2	2	1	2	–	–	–	–
La.	–	–	–	–	–	–	3	–	–	–	–	–	–
Okla.	–	–	–	–	–	2	3	–	–	–	–	–	–
Tex.	2	2	2	2	6	9	21	5	10	1	1	11	8
MOUNTAIN	–	1	–	–	5	3	13	4	8	1	–	2	2
Mont.	–	–	–	–	–	1	2	1	1	–	–	–	–
Idaho	–	–	–	–	–	–	–	–	2	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	1	–
Colo.	–	1	–	–	–	2	5	–	–	1	–	–	–
N. Mex.	–	–	–	–	–	–	1	–	–	–	–	–	–
Ariz.	–	–	–	–	–	–	2	2	3	–	–	–	1
Utah	–	–	–	–	–	–	1	–	1	–	–	1	1
Nev.	–	–	–	–	5	–	2	1	1	–	–	–	–
PACIFIC	4	24	1	9	46	11	40	11	48	3	4	53	39
Wash.	–	1	–	–	–	–	4	3	12	2	–	1	7
Oreg.	–	2	–	–	–	6	13	–	–	–	–	–	–
Calif.	3	20	1	8	46	5	22	8	36	1	4	51	32
Alaska	–	–	–	–	–	–	1	–	–	–	–	–	–
Hawaii	1	1	–	1	–	–	–	–	–	–	–	1	–
Guam	U	–	U	–	2	U	–	U	–	U	U	–	–
P.R.	–	–	3	4	14	–	–	–	2	–	–	–	–
V.I.	–	–	–	–	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 30, 1982 and January 31, 1981 (4th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	2,506	2,269	452	1,540	4	17	32	2	11	295
NEW ENGLAND	39	55	17	47	–	–	1	–	–	3
Maine	–	1	2	3	–	–	–	–	–	3
N.H.	–	3	–	2	–	–	–	–	–	–
Vt.	–	1	–	3	–	–	–	–	–	–
Mass.	28	31	14	30	–	–	1	–	–	–
R.I.	3	8	–	6	–	–	–	–	–	–
Conn.	8	11	1	3	–	–	–	–	–	–
MID. ATLANTIC	362	336	40	188	–	2	4	–	–	1
Upstate N.Y.	28	33	12	42	–	–	1	–	–	–
N.Y. City	248	196	20	94	–	1	2	–	–	–
N.J.	35	44	–	–	–	1	1	–	–	–
Pa.	51	63	8	52	–	–	–	–	–	1
E.N. CENTRAL	78	157	79	252	–	2	3	–	–	27
Ohio	14	28	8	58	–	1	1	–	–	2
Ind.	20	10	15	32	–	–	–	–	–	2
Ill.	20	99	34	95	–	–	–	–	–	13
Mich.	15	9	18	51	–	1	2	–	–	–
Wis.	9	11	4	16	–	–	–	–	–	10
W.N. CENTRAL	53	35	16	30	3	2	2	–	–	96
Minn.	11	7	5	5	–	–	–	–	–	26
Iowa	1	1	–	3	–	1	1	–	–	28
Mo.	33	22	6	10	2	1	1	–	–	11
N. Dak.	1	–	–	1	–	–	–	–	–	13
S. Dak.	–	–	–	2	–	–	–	–	–	–
Nebr.	–	2	1	1	–	–	–	–	–	11
Kans.	7	3	4	8	1	–	–	–	–	7
S. ATLANTIC	730	575	95	329	–	2	3	1	7	41
Del.	2	1	–	1	–	–	–	–	–	–
Md.	52	45	–	58	–	1	1	–	4	2
D.C.	43	55	–	11	–	–	–	–	–	–
Va.	50	47	20	27	–	–	1	–	–	16
W. Va.	2	–	2	8	–	1	1	–	–	2
N.C.	59	51	14	47	–	–	–	1	3	–
S.C.	44	49	10	34	–	–	–	–	–	4
Ga.	150	144	17	62	–	–	–	–	–	14
Fla.	328	183	32	81	–	–	–	–	–	3
E.S. CENTRAL	155	157	38	142	–	4	5	1	3	23
Ky.	9	11	17	45	–	–	–	–	–	4
Tenn.	25	47	10	42	–	–	1	–	–	13
Ala.	51	54	11	55	–	4	4	1	3	6
Miss.	70	45	–	–	–	–	–	–	–	–
W.S. CENTRAL	734	583	61	118	1	–	1	–	–	46
Ark.	20	6	–	–	1	–	–	–	–	10
La.	126	108	28	30	–	–	–	–	–	–
Okla.	15	14	10	26	–	–	1	–	–	14
Tex.	573	455	23	62	–	–	–	–	–	22
MOUNTAIN	58	59	16	47	–	2	2	–	–	4
Mont.	–	1	1	2	–	–	–	–	–	1
Idaho	1	–	2	2	–	–	–	–	–	–
Wyo.	3	1	–	–	–	–	–	–	–	1
Colo.	22	14	–	8	–	–	–	–	–	–
N. Mex.	16	15	4	9	–	–	–	–	–	1
Ariz.	1	17	6	20	–	2	2	–	–	1
Utah	2	–	–	–	–	–	–	–	–	–
Nev.	13	11	3	6	–	–	–	–	–	–
PACIFIC	297	312	90	387	–	3	11	–	1	54
Wash.	–	6	8	16	–	–	–	–	–	–
Oreg.	16	9	1	7	–	–	–	–	–	–
Calif.	273	288	71	346	–	3	11	–	1	50
Alaska	1	1	8	8	–	–	–	–	–	4
Hawaii	7	8	2	10	–	–	–	–	–	–
Guam	–	–	U	–	–	U	–	U	–	–
P.R.	28	39	2	7	–	–	–	–	–	2
V.I.	–	–	–	1	–	–	–	–	–	–
Pac. Trust Terr.	–	–	U	–	–	U	–	U	–	–

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 30, 1982 (4th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	688	450	159	44	14	21	49
Boston, Mass.	177	99	47	15	10	6	24
Bridgeport, Conn.	51	39	9	3	–	–	3
Cambridge, Mass.	30	23	5	2	–	–	3
Fall River, Mass.	37	28	7	2	–	–	1
Hartford, Conn.	56	37	12	3	1	3	1
Lowell, Mass.	29	23	5	1	–	–	2
Lynn, Mass.	15	11	2	2	–	–	–
New Bedford, Mass.	22	18	4	–	–	–	–
New Haven, Conn.	31	18	7	3	1	2	2
Providence, R.I.	86	52	24	5	–	5	6
Somerville, Mass.	7	4	2	1	–	–	1
Springfield, Mass.	42	19	18	2	1	2	1
Waterbury, Conn.	46	39	6	1	–	–	2
Worcester, Mass.	59	40	11	4	1	3	3
MID. ATLANTIC	2,811	1,908	622	149	54	78	112
Albany, N.Y.	55	38	13	2	2	–	1
Allentown, Pa.	20	14	5	1	–	–	–
Buffalo, N.Y.	150	97	40	2	7	4	8
Camden, N.J.	40	22	9	2	3	4	2
Elizabeth, N.J.	35	26	7	2	–	–	1
Erie, Pa.†	54	38	11	2	1	2	1
Jersey City, N.J.	73	47	14	4	5	3	2
N.Y. City, N.Y.	1,488	1,028	315	82	22	41	56
Newark, N.J.	60	29	18	11	1	1	5
Paterson, N.J.§	32	26	–	3	–	3	–
Philadelphia, Pa.†	292	180	86	15	7	4	17
Pittsburgh, Pa.†	87	48	26	4	3	6	3
Reading, Pa.	36	30	5	1	–	–	2
Rochester, N.Y.	124	91	20	10	–	3	7
Schenectady, N.Y.	29	24	4	1	–	–	1
Scranton, Pa.†	42	32	9	1	–	–	2
Syracuse, N.Y.	96	62	22	4	3	5	2
Trenton, N.J.	54	42	11	–	–	1	–
Utica, N.Y.	25	20	3	1	–	1	–
Yonkers, N.Y.	19	14	4	1	–	–	2
E.N. CENTRAL	2,495	1,623	596	141	60	74	72
Akron, Ohio	87	62	21	1	3	–	–
Canton, Ohio	40	28	11	1	–	–	7
Chicago, Ill.	610	360	151	54	23	22	16
Cincinnati, Ohio	143	94	41	5	1	2	6
Cleveland, Ohio	187	100	64	15	4	4	3
Columbus, Ohio	138	85	32	6	8	7	6
Dayton, Ohio	109	72	28	5	2	2	3
Detroit, Mich.	283	171	67	24	6	15	7
Evansville, Ind.	67	48	17	–	–	2	3
Fort Wayne, Ind.	51	31	9	5	2	4	2
Gary, Ind.	16	6	7	1	1	1	–
Grand Rapids, Mich.	72	57	11	1	2	1	1
Indianapolis, Ind.	169	109	41	8	4	7	6
Madison, Wis.	29	21	5	1	1	1	–
Milwaukee, Wis.	130	91	31	6	1	1	–
Peoria, Ill.	27	21	6	–	–	–	–
Rockford, Ill.	61	40	16	3	–	2	4
South Bend, Ind.	57	41	14	2	–	–	5
Toledo, Ohio §	119	115	–	1	1	1	1
Youngstown, Ohio	100	71	24	2	1	2	2
W.N. CENTRAL	845	583	161	47	21	33	32
Des Moines, Iowa	61	43	15	3	–	–	1
Duluth, Minn.	30	24	2	2	1	1	–
Kansas City, Kans.	43	23	15	3	1	1	–
Kansas City, Mo.	140	92	35	4	5	4	8
Lincoln, Nebr.	25	19	4	–	–	2	1
Minneapolis, Minn.	99	63	20	3	4	9	2
Omaha, Nebr.	93	73	15	1	3	1	2
St. Louis, Mo.	194	142	29	15	2	6	10
St. Paul, Minn.	80	55	10	7	3	5	2
Wichita, Kans.	80	49	16	9	2	4	6
S. ATLANTIC	1,601	951	429	118	44	60	63
Atlanta, Ga.	217	136	44	21	5	11	5
Baltimore, Md.	357	199	114	21	15	8	7
Charlotte, N.C.	66	37	20	1	2	5	4
Jacksonville, Fla.	100	59	28	8	5	–	1
Miami, Fla.	134	81	42	6	2	3	1
Norfolk, Va.	66	44	15	–	4	3	8
Richmond, Va.	95	59	23	9	1	3	7
Savannah, Ga.	56	29	16	9	1	1	8
St. Petersburg, Fla.	135	104	21	5	1	4	3
Tampa, Fla.	78	50	16	4	3	5	12
Washington, D.C.	233	115	73	27	3	15	4
Wilmington, Del.	64	38	17	5	2	2	3
E.S. CENTRAL	806	501	206	48	23	28	37
Birmingham, Ala.	163	104	34	13	4	8	2
Chattanooga, Tenn.	69	45	19	3	1	1	6
Knoxville, Tenn.	65	38	18	4	3	2	2
Louisville, Ky.	121	73	31	5	5	7	8
Memphis, Tenn.	206	129	50	15	4	8	11
Mobile, Ala.	40	26	9	2	2	1	2
Montgomery, Ala.	19	10	6	3	–	–	1
Nashville, Tenn.	123	76	39	3	4	1	5
W.S. CENTRAL	1,373	788	336	117	55	77	53
Austin, Tex.	55	37	13	1	1	3	4
Baton Rouge, La.	43	21	13	4	2	3	1
Corpus Christi, Tex.	62	40	13	2	4	3	1
Dallas, Tex.	252	140	67	23	4	18	9
El Paso, Tex.	46	30	8	4	2	2	1
Fort Worth, Tex.	115	59	24	11	5	16	5
Houston, Tex.	192	96	52	24	14	6	3
Little Rock, Ark.	68	33	21	7	3	4	6
New Orleans, La.	180	100	50	17	6	7	2
San Antonio, Tex.	194	122	37	14	9	12	12
Shreveport, La.	67	49	12	4	1	1	2
Tulsa, Okla.	99	61	26	6	4	2	7
MOUNTAIN	660	425	140	51	22	22	43
Albuquerque, N.Mex.	55	20	18	12	5	–	1
Colo. Springs, Colo.	41	32	6	2	1	–	5
Denver, Colo.	121	85	23	7	1	5	6
Las Vegas, Nev.	95	49	22	13	8	3	7
Ogden, Utah	21	9	5	3	1	3	3
Phoenix, Ariz.	145	106	29	5	1	4	4
Pueblo, Colo.	19	15	2	–	–	2	3
Salt Lake City, Utah	48	25	13	2	4	4	1
Tucson, Ariz.	115	84	22	7	1	1	13
PACIFIC	2,130	1,455	434	128	50	62	124
Berkeley, Calif.	28	25	1	–	2	–	1
Fresno, Calif.	71	48	16	4	2	1	4
Glendale, Calif.	40	34	5	1	–	–	2
Honolulu, Hawaii	63	42	9	7	1	4	4
Long Beach, Calif.	128	91	28	6	–	3	7
Los Angeles, Calif.	801	557	141	55	30	17	35
Oakland, Calif.	92	58	24	5	1	4	5
Pasadena, Calif.	32	22	7	–	1	2	3
Portland, Oreg.	138	89	29	10	1	9	–
Sacramento, Calif.	57	37	12	2	1	5	12
San Diego, Calif.	142	96	32	8	2	4	17
San Francisco, Calif.	128	93	25	8	1	1	5
San Jose, Calif.	177	108	48	13	4	4	15
Seattle, Wash.	135	90	34	7	1	3	3
Spokane, Wash.	62	34	21	1	2	4	8
Tacoma, Wash.	36	31	2	1	1	1	3
TOTAL	13,409††	8,684	3,083	841	343	455	585

---

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Surveillance Summary

Abortion Surveillance, 1979 — Provisional Statistics

In 1979, all 50 states and the District of Columbia reported to CDC a provisional total of 1,238,987 legally induced abortions, a 7% increase over 1978 (Table 1). The national abortion ratio increased by 3%, from 347 to 358/1,000 live births, amounting to more than 1 abortion for every 3 live births.

New York and California reported the largest number of abortions, as they have done consistently since 1970. Abortions in these 2 states represented 28% of the national total in 1979, approximately the same percentage as in the 3 previous years. Idaho, South Dakota, and Wyoming each reported fewer than 2,500 abortions. The majority of states reported an increased number of abortions, with only 7 states reporting a decrease. Abortion ratios ranged from a low of 84/1,000 live births in Wyoming to a high of over 1,000/1,000 in the District of Columbia. Twelve states, New York City, and the District of Columbia recorded a decrease from 1978 in the abortion ratio.

TABLE 1. Provisional number of legal abortions, live births, and abortion ratios, reported by state of occurrence, 1979

State	Abortions*	Live births†	Ratio§
Alabama	15,300¶	60,628	252
Alaska	2,600**	8,912	292
Arizona	7,811	45,707	171
Arkansas	6,059	35,008	173
California	187,312	363,463	515
Colorado	16,476††	47,813	345
Connecticut	14,214	36,959	385
Delaware	3,636	9,123	399
Dist. of Col.	28,694	20,334	§§
Florida	56,152	120,839	465
Georgia	36,588	89,446	409
Hawaii	6,125	17,429	351
Idaho	2,446	19,686	124
Illinois	68,187††	181,218	376
Indiana	14,658	87,452	168
Iowa	5,247¶	47,083	111
Kansas	12,335††	37,100	332
Kentucky	11,340	60,182	188
Louisiana	13,512	79,413	170
Maine	3,963	15,755	252
Maryland	25,526	50,043	510
Massachusetts	44,044	73,104	602
Michigan	44,542¶	142,127	313
Minnesota	18,672	64,939	288
Mississippi	4,411	45,913	96
Missouri	17,289††	78,505	220
Montana	3,447††	13,803	250
Nebraska	4,608††	26,093	177
Nevada	6,374	11,830	539
New Hampshire	3,116¶	12,830	243
New Jersey	24,714	91,896	269
New Mexico	5,193	25,570	203

Abortion Surveillance – Continued

TABLE 1. Provisional number of legal abortions, live births, and abortion ratios, reported by state of occurrence, 1979 – ***Continued***

New York	154,183	231,787	665
(City)	(103,814)††	(106,394)	(976)
(Upstate)	(50,369)††	(125,395)	(402)
North Carolina	29,479	84,388	349
North Dakota	2,150¶¶	12,769	168
Ohio	41,851	164,111	255
Oklahoma	10,710	47,214	227
Oregon	14,501††	42,984	337
Pennsylvania	64,147	157,783	407
Rhode Island	5,389††	12,235	440
South Carolina	10,976††	49,956	220
South Dakota	1,398	12,623	111
Tennessee	23,400††	72,261	324
Texas	76,996	265,066	290
Utah	3,697††	42,304	87
Vermont	2,925††	7,396	395
Virginia	31,414††	73,812	426
Washington	29,710	55,077	539
West Virginia	2,954¶	30,263	98
Wisconsin	17,764¶¶	72,818	244
Wyoming	752	8,946	84
Totals	1,238,987	3,463,996	358

* 1979 abortion data from central health agencies unless otherwise noted.

† Provisional from National Center for Health Statistics, Monthly Vital Statistics Report, Volume 29, Number 12, March 18, 1981.

§ Abortions/1000 live births (provisional live birth data from National Center for Health Statistics, Monthly Vital Statistics Report, Vol. 29, No. 12, March 18, 1981)

¶ Reported from hospitals and/or facilities in state.

** 1978 abortion data from the Alan Guttmacher Institute.

†† Data from Vital Statistics Division, National Center for Health Statistics.

§§ Greater than 1,000 abortions/1,000 live births.

¶¶ 1978 abortion data from central health agency.

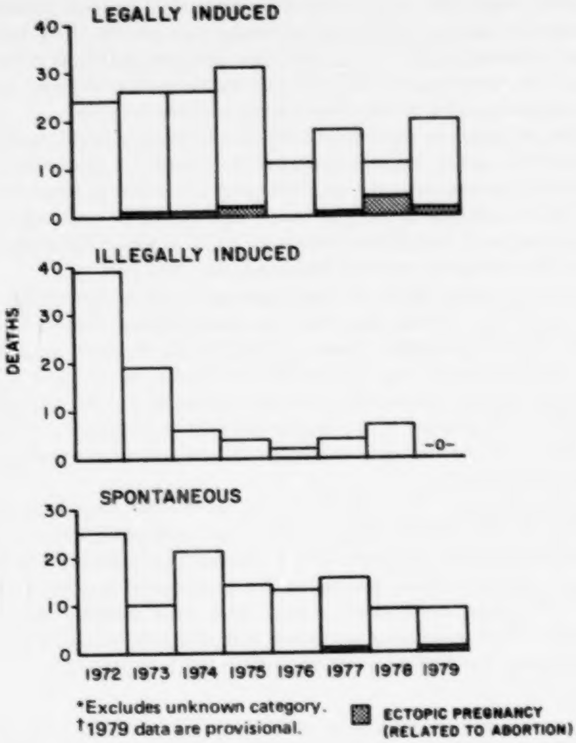
Twenty-nine women died after abortions in 1979, 2 more than in 1978. Fluctuations in the total number of abortion deaths reflect variations in all 3 abortion categories—legally induced, illegally induced, and spontaneous (Figure 4). Twenty women died after legally induced abortions in 1979, compared with 11 in 1978. Using national denominators and excluding ectopic-pregnancy deaths from the numerators, the crude death-to-case rate was 1.5/100,000 legally induced abortions in 1979 compared with 0.6 in 1978 (Table 2).

No deaths were reported due to illegally induced abortions in 1979; 7 had been reported in 1978. Previously the lowest annual number of deaths after illegal abortions was 2 in 1976 (Figure 4). In 1979, 9 women died from spontaneous abortions in the United States, compared with a mean of 15 deaths per year for the 7 preceding years. One death from an ectopic pregnancy was apparently misdiagnosed as an incomplete spontaneous abortion. None of the spontaneous-abortion deaths were associated with intrauterine devices.

Reported by Abortion Surveillance Br, Statistical Svcs Br, Family Planning Evaluation Div, Center for Health Promotion and Education, CDC.

Abortion Surveillance – Continued

FIGURE 4. Abortion-related deaths by category* and year,† United States, 1972-1979



*Excludes unknown category.
†1979 data are provisional.

TABLE 2. Death-to-case rates for induced abortions,* United States, 1972-1979

Year	Rate
1972	4.1
1973	4.1
1974	3.3
1975	3.4
1976	1.1
1977	1.6
1978	0.6
1979	1.5

*Excludes deaths from ectopic pregnancies.

Abortion Surveillance – Continued

Editorial Note: This report presents provisional data; a more complete abortion surveillance report and annual summary are forthcoming.

Since 1969, when CDC began collecting information on legal abortions, the number of women obtaining these procedures has increased each year. In 1979, the total number of legal abortions reported to CDC rose by the same percentage (7%) as in the previous year. The abortion ratio, however, rose by less than half the percentage increase reported in 1978, indicating a relatively larger increase in the number of births in 1979.

The number of abortions reported to CDC for 1979 was probably less than the number actually performed. In public-health surveillance, the number of cases reported is usually lower than the number obtained through national surveys (*1*)—such as those of the Alan Guttmacher Institute (AGI)—a difference that has been substantiated by statewide surveys (*2-3*). AGI's projected estimate of 1,540,000 abortions for 1979 is about 20% higher than CDC's provisional figure. This difference has been consistent over time (*4*).

No deaths from illegal abortions were reported in 1979. This is the first reporting year since 1972, when CDC surveillance of abortion deaths began, that no such deaths have been reported. We regard the number of deaths due to illegal abortions as an indirect reflection of the number of such procedures performed. The decline since 1972 in deaths from illegal abortions is probably the result of an increased availability of safer, legal procedures throughout the country. The absence of any deaths from illegal abortions in 1979 indicates that restricting federal funds for abortion probably had little impact in causing low-income women to seek illegal abortions (*5*).

The inclusion between 1972 and 1979 of 13 deaths from ectopic pregnancy (2 after diagnoses of spontaneous abortions and 11 after attempted legally induced abortions) accounts for most of the difference between this and previous publications in the number of abortion-related deaths reported. During this period, the incidence of ectopic pregnancy in the United States has been rising, while death-to-case rates have declined (*6*). Of these 13 deaths reported from ectopic pregnancy associated with abortion, 9 occurred in the last 3 reporting years of the period: 2 in 1977, 4 in 1978, and 3 in 1979 (Figure 4).

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CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Current Trends

National Surveillance for Reye Syndrome, 1981: Update, Reye Syndrome and Salicylate Usage

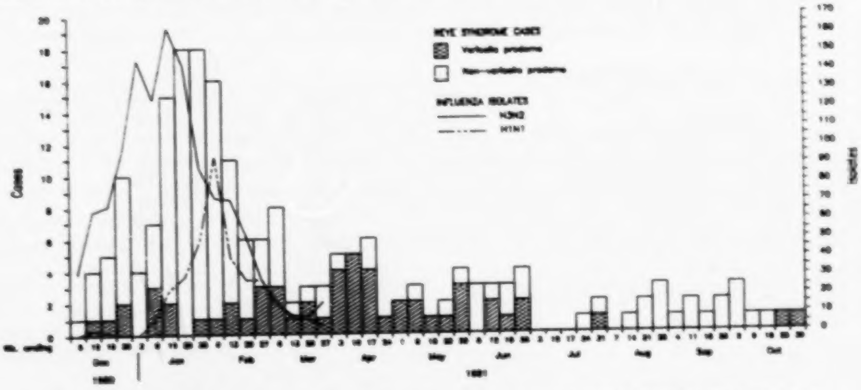
For the period December 1, 1980-October 31, 1981,* CDC received written reports of 221 cases of Reye syndrome that met the CDC case definition (*1*). These cases were reported from 39 states and the District of Columbia. The sex, age, and racial distribution of patients was similar to that reported in previous years. Of patients for whom sex was known, 51% were female. Of patients of known age, 35% (73) were ≤4 years of age, 59% (124) were 5-14 years, and 6% (12) were ≥15 years. Among 211 patients of known race, 94% were white, 4% black, and 2% of Asian extraction. Of the patients with a reported antecedent illness, 60% (121) had respiratory symptoms, 30% (60) had varicella, and 10% (22) had diarrhea.

Seventy-seven percent of the patients with Reye syndrome were hospitalized in the period December 5-March 27, coincident with reports of increased influenza A(H3N2/H1N1) virus activity in the United States. Numbers of hospitalizations rose in direct proportion to increases in numbers of reports of influenza A(H3N2) virus activity (Figure 1). The number of Reye syndrome cases peaked approximately 1 week after the peak number of reported influenza A (H3N2) isolates, presumably reflecting the 5-7 day interval between antecedent illness and

---

*For the purposes of surveillance, Reye syndrome years extend from December 1 to November 30 of the following year. This report is based upon preliminary data.

FIGURE 1. Reye syndrome cases by week of hospitalization, and influenza isolates, by week of report, December 1, 1980-October 30, 1981



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Reye Syndrome – Continued

hospitalization of patients with Reye syndrome (*2*). The number of cases of Reye syndrome remained elevated during the peak period of H1N1 activity.

The incidence of Reye syndrome reported in 1980-1981 was similar to that reported in a previous year (1977-1978) of influenza A (H3N2/H1N1) activity and was approximately half that reported in years when influenza B or influenza A (H1N1) was prevalent (Table 1).

In 1981, of 208 reported cases for which the outcome was reported, there were 58 deaths, for a case fatality ratio (CFR) of 28%. This ratio is approximately equal to the average CFR for the preceding 3 years and one-third lower than that reported during the first 2 surveillance periods (1973-1974, 1976-1977) (Table 1). CFRs reported to CDC probably represent overestimates, because of a tendency for physicians and health departments to report severe illness or death more consistently than mild illness. Although the lower CFRs in recent years may have resulted in part from more complete reporting of mild cases, it is noteworthy that a larger percentage of all patients reported in recent years were admitted to the hospital in an early stage of the syndrome (suggesting earlier recognition). Furthermore, there has been a decrease in mortality rates among patients admitted in each stage of encephalopathy (suggesting improvements in therapy).

In addition to 3 previously reported case-control studies conducted in Arizona, Michigan and Ohio (*3,4*), a fourth study, reported to CDC by the Michigan Department of Public Health, demonstrated a relationship between Reye syndrome and the ingestion of salicylates during the antecedent illness. The goal of this study was to test the reproducibility of findings of the earlier study conducted by the Michigan Department of Public Health during the 1979-1980 influenza season. The recent study concentrated on all medications, including dosage and frequency of administration, taken during the illness preceding Reye syndrome. Patients and controls (1-3 controls for each patient) matched for year in school (± 1), race, febrile response (<100 F, 100 F-102.9 F, and ≥103 F) and nature of prodromal illness (i.e., chickenpox or respiratory or gastrointestinal illness) were selected. Interviews were conducted as soon as possible after each case was reported (mean 5.5 days).

All 12 patients with Reye syndrome versus 12 of 29 (41.4%) controls reported using medications containing salicylates during the prodromal illness ($p < 0.001$). None of the 12 patients versus 16 of 29 (55.2%) controls received a product containing acetaminophen ($p < 0.005$). Analysis of factors that might confound the usage of salicylates, including mean

TABLE 1. Incidence of Reye syndrome, by year, United States, 1976-1981

				Death to case ratio	
Year	Major influenza activity	Number of cases	Incidence[*]	Number of deaths/cases[†]	Ratio (%)
1973-1974[§]	B	379	0.58	157/379	41
1976-1977	B	454	0.71	156/373	42
1977-1978	A (H3N2/H1N1)	237	0.37	66/225	29
1978-1979	A (H1N1)	389	0.62	113/349	32
1979-1980	B	517	0.88	114/516	22
1980-1981	A (H3N2/H1N1)	221[¶]	0.31	58/210	28

[*] Cases/100,000 population < 18 years of age.

[†] With known outcome.

[§] For the period December 15, 1973-June 30, 1974.

[¶] Preliminary count.

Reye Syndrome – Continued

duration of viral illness, mean age of parents, mean number of medications received during the viral illness, and mean peak temperature reported, revealed that patient and control groups were similar. The total amount of salicylates received by children with Reye syndrome during their prodromal illness ranged from 19.4 mg/kg body weight to 324 mg/kg (mean 121.6 mg/kg), and the maximum daily dosage received ranged from 10.8 to 78.6 mg/kg (mean 41.7 mg/kg).

Reported by W Hall, MD, Michigan Dept of Public Health; Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Previous statements on the possible association of medications and Reye syndrome have been issued by an NIH consensus conference (5) the FDA (6) and CDC (*1*). These earlier statements were made before the availability of the study results presented above.

All 4 studies reported from Arizona, Michigan (2 studies), and Ohio, showed a relationship between Reye syndrome and salicylates. As in all epidemiologic studies, a number of issues must be considered in interpreting results and reaching conclusions. To evaluate the data, CDC recently solicited assistance from 8 outside consultants* who were asked to review the 4 reported studies and assess the strength of the association between salicylate use and Reye syndrome.

Issues cited and discussed by CDC in its report on the Ohio and first Michigan studies included 1) recall bias, i.e., difficulties in obtaining comparable and accurate medication histories for patients following a significant event (Reye syndrome) when compared with controls with a relatively mild illness, and the difficulty of accurate recall of events several weeks later; 2) severity of illness, i.e., the possibility that patients with Reye syndrome had more severe antecedent illness and thus may have been predisposed to take more medications, including salicylates, than did matched controls; and 3) the comparability of viral infections in case and control groups; serologic studies were not done as part of these investigations.

Some additional areas of concern noted by the consultants, industry representatives and others included : 1) interviewer bias, i.e., the knowledge of the interviewer of the case-control status of the subject; 2) interview techniques that were not comparable, i.e., medication histories were more often verified (including checking of medication labels) for controls (whose parents were interviewed at home) than for patients (whose parents were usually interviewed in the hospital), which may have resulted in a tendency for parents of patients more often than for parents of controls to misclassify the generic drug used by their children; 3) possibile misclassification of Reye syndrome, i.e., since biopsies were not routinely performed, it was possible that some persons with mild illness might be included in the group of patients diagnosed as having Reye syndrome.

After reviewing the data from all 4 studies and discussing the various epidemiologic and analytic methods and results, the CDC consultants concluded that it was unlikely for the limitations of the studies, either singly or in combination, to explain totally the strength and consistency of the observed association between Reye syndrome and salicylates. The consultants felt there was "...sufficient evidence to support the cautionary statements on salicylate usage that had been published previously by the Centers for Disease Control (*4*) and the NIH Consensus Development Conference (*5*)." Furthermore, it was the consensus of the consultants

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*The consultants included: E. Russell Alexander, M.D., Tucson, AZ; David J. Lang, M.D., Baltimore, MD; Franz Rosa, M.D., Rockville, MD; Ralph Kauffman, M.D., Detroit, MI, Edward A. Mortimer, Jr., M.D., Cleveland, OH; Stuart Hartz, Sc.D., Boston, MA; Jacqueline Partin, M.S., Long Island, NY; and Brian Strom, M.D., M.P.H., Philadelphia, PA.

Reye Syndrome – Continued

that "...until the nature of the association between salicylates and Reye syndrome is clarified, the use of salicylates should be avoided, when possible, for children with varicella infections and during presumed influenza outbreaks." In addition, these consultants suggested that it would be prudent to reserve the use of all antipyretic agents for persons who have an illness of such a nature that the need to reduce elevated temperatures outweighs other considerations (7).

In summary, these studies indicate to CDC that salicylates may be a factor in the pathogenesis of Reye syndrome, although the observed epidemiologic association does not prove causality. The exact pathogenesis of this disease and the possible role of salicylates in its pathogenesis remain to be determined. Additional well-controlled studies are also needed. Until definitive information is available, CDC advises physicians and parents of the possible increased risk of Reye syndrome associated with the use of salicylates for children with chickenpox or influenza-like illness.

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(Continued on page 61)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		5th WEEK ENDING			CUMULATIVE, FIRST 5 WEEKS		
		February 6 1982	February 7 1981	MEDIAN 1977-1981	February 6 1982	February 7 1981	MEDIAN 1977-1981
Aseptic meningitis		89	57	43	408	337	253
Brucellosis		2	3	3	6	9	9
Encephalitis:	Primary (arthropod-borne & unspec.)	21	9	11	63	67	53
	Post-infectious	1	2	3	2	7	9
Gonorrhea:	Civilian	18,506	20,540	19,189	92,273	96,877	92,424
	Military	682	719	719	2,764	2,987	2,762
Hepatitis:	Type A	445	536	558	1,837	2,195	2,459
	Type B	360	364	306	1,567	1,607	1,387
	Non A, Non B	44	N	N	115	N	N
	Unspecified	199	210	172	814	965	868
Legionellosis		4	N	N	20	N	N
Leprosy		4	4	4	6	14	14
Malaria		7	33	9	51	123	47
Measles (rubeola)		14	42	255	50	168	871
Meningococcal infections:	Total	58	117	62	271	420	264
	Civilian	58	117	62	270	419	263
	Military	–	–	–	1	1	1
Mumps		65	101	408	353	469	1,424
Pertussis		13	29	29	60	76	99
Rubella (German measles)		34	39	118	137	206	502
Syphilis (Primary & Secondary):	Civilian	708	645	517	3,214	2,914	2,295
	Military	7	2	7	52	32	29
Tuberculosis		481	485	510	2,046	2,004	2,054
Tularemia		2	2	2	6	11	10
Typhoid fever		7	14	7	40	43	27
Typhus fever, tick-borne (RMSF)		2	–	1	13	6	5
Rabies, animal		59	95	55	364	469	245

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	–
Botulism (Calif. 2)	10	Poliomyelitis: Paralytic	–
Cholera	1	Psittacosis	6
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus (Nev. 1, Calif. 1)	5
Leptospirosis (Ark. 1, Wash. 3)	7	Trichinosis (N.J. 8)	13
Plague	1	Typhus fever, flea-borne (endemic, murine) (Ala. 1)	1

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 6, 1982 and February 7, 1981 (5th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	89	6	63	2	92,273	96,877	465	360	44	199	4	6
NEW ENGLAND	2	-	1	-	2,092	2,572	9	6	1	7	-	-
Maine	1	-	-	-	117	124	-	1	-	-	-	-
N.H.	-	-	-	-	84	96	2	-	1	-	-	-
Vt.	-	-	-	-	50	40	1	-	-	-	-	-
Mass.	-	-	1	-	812	970	2	2	-	7	-	-
R.I.	1	-	-	-	136	111	4	-	-	-	-	-
Conn.	-	-	-	-	893	1,231	-	3	-	-	-	-
MID. ATLANTIC	11	-	9	-	10,466	10,836	57	52	1	23	2	-
Upstate N.Y.	3	-	4	-	1,325	1,364	15	21	-	10	-	-
N.Y. City	5	-	3	-	4,831	4,125	22	19	-	2	2	-
N.J.	1	-	-	-	1,809	2,650	20	12	1	11	-	-
Pa.	2	-	2	-	2,501	2,717	U	U	U	U	-	-
E.N. CENTRAL	2	-	15	-	11,342	15,300	51	31	3	26	-	-
Ohio	-	-	1	-	3,480	5,664	15	8	1	4	-	-
Ind.	-	-	7	-	1,844	1,157	8	7	-	13	-	-
Ill.	-	-	-	-	1,661	3,484	17	7	2	2	-	-
Mich.	2	-	6	-	3,208	3,402	9	8	-	7	-	-
Wis.	-	-	1	-	1,149	1,293	2	1	-	-	-	-
W.N. CENTRAL	3	1	3	-	4,413	4,961	13	21	1	4	-	-
Minn.	-	-	-	-	686	760	8	3	1	1	-	-
Iowa	-	-	2	-	427	455	1	3	-	-	-	-
Mo.	2	1	1	-	2,056	2,327	4	13	-	3	-	-
N. Dak.	-	-	-	-	49	46	-	-	-	-	-	-
S. Dak.	-	-	-	-	139	126	-	-	-	-	-	-
Nebr.	-	-	-	-	224	370	-	1	-	-	-	-
Kans.	1	-	-	-	832	877	-	1	-	-	-	-
S. ATLANTIC	18	2	7	1	24,545	24,262	26	95	11	10	1	-
Del.	-	-	-	-	368	395	-	-	1	-	-	-
Md.	3	-	4	-	3,150	2,598	6	16	2	2	1	-
D.C.	-	-	-	-	1,108	1,544	-	4	-	-	-	-
Va.	4	2	2	-	1,873	2,299	4	14	5	3	-	-
W. Va.	2	-	-	-	242	314	3	5	-	-	-	-
N.C.	6	-	1	-	4,050	4,063	5	12	-	2	-	-
S.C.	-	-	-	-	2,030	2,244	-	12	-	1	-	-
Ga.	-	-	-	-	4,605	5,012	2	14	1	-	-	-
Fla.	3	-	-	1	7,119	5,793	6	18	2	2	-	-
E.S. CENTRAL	15	-	4	-	7,345	8,035	24	31	2	2	-	-
Ky.	13	-	-	-	953	1,314	15	10	-	-	-	-
Tenn.	1	-	3	-	2,808	2,860	8	12	-	2	-	-
Ala.	-	-	1	-	2,041	2,810	1	9	2	-	-	-
Miss.	1	-	-	-	1,543	1,351	-	-	-	-	-	-
W.S. CENTRAL	6	-	4	-	14,124	14,329	90	20	2	64	-	-
Ark.	-	-	-	-	1,229	920	-	-	1	1	-	-
La.	-	-	-	-	2,152	2,123	16	2	-	7	-	-
Okla.	1	-	3	-	1,462	1,385	9	3	1	7	-	-
Tex.	5	-	1	-	9,281	9,901	65	15	-	49	-	-
MOUNTAIN	6	-	5	1	3,383	3,359	64	16	6	17	-	-
Mont.	1	-	-	-	177	118	-	-	-	-	-	-
Idaho	-	-	-	-	143	145	4	-	-	-	-	-
Wyo.	-	-	-	-	109	97	24	-	3	-	-	-
Colo.	1	-	1	1	983	831	7	2	2	5	-	-
N. Mex.	-	-	-	-	396	474	18	1	-	1	-	-
Ariz.	-	-	1	-	911	1,035	5	1	1	3	-	-
Utah	-	-	-	-	135	166	1	2	-	-	-	-
Nev.	4	-	3	-	529	493	5	10	-	8	-	-
PACIFIC	26	3	15	-	14,563	13,523	111	88	17	46	1	6
Wash.	4	-	2	-	1,198	963	11	-	-	-	1	-
Oreg.	-	-	-	-	833	1,113	3	7	2	2	-	-
Calif.	14	3	13	-	11,920	10,817	96	78	15	44	-	3
Alaska	2	-	-	-	365	345	-	1	-	-	-	-
Hawaii	6	-	-	-	247	305	1	2	-	-	-	3
Guam	U	-	-	-	-	21	U	U	U	U	U	-
P.R.	-	-	-	-	137	308	2	3	-	1	-	-
V.I.	-	-	-	-	24	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	-	55	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 6, 1982 and February 7, 1981 (5th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	7	51	14	50	168	58	271	65	353	13	34	137	206
NEW ENGLAND	1	3	-	3	6	2	12	10	34	2	1	6	41
Maine	-	-	-	-	-	-	2	2	9	-	-	-	23
N.H.	-	-	-	1	2	-	3	1	4	-	1	6	16
Vt.	-	-	-	2	1	-	1	-	3	-	-	-	-
Mass.	-	2	-	-	-	1	1	5	13	-	-	-	2
R.I.	-	-	-	-	-	-	1	2	3	2	-	-	-
Conn.	1	1	-	-	3	1	4	-	2	-	-	-	-
MID. ATLANTIC	-	2	2	15	52	10	37	7	25	2	4	7	40
Upstate N.Y.	-	-	1	9	31	2	8	5	11	2	4	5	15
N.Y. City	-	2	1	5	6	1	8	-	6	-	-	2	8
N.J.	-	-	-	-	5	2	13	1	3	-	-	-	15
Pa.	-	-	-	1	10	5	8	1	5	-	-	-	2
E.N. CENTRAL	-	5	1	1	5	5	21	22	139	3	3	16	38
Ohio	-	-	-	-	-	2	8	-	60	-	-	-	-
Ind.	-	-	1	1	-	1	1	2	8	2	-	1	16
Ill.	-	-	-	-	-	-	3	7	13	-	-	8	7
Mich.	-	4	-	-	5	2	9	8	44	-	-	1	5
Wis.	-	1	-	-	-	-	-	5	14	1	3	6	10
W.N. CENTRAL	-	1	-	-	-	2	13	2	16	-	-	5	6
Minn.	-	-	-	-	-	-	4	-	-	-	-	1	-
Iowa	-	-	-	-	-	-	1	-	5	-	-	-	-
Mo.	-	1	-	-	-	1	6	1	3	-	-	2	-
N. Dak.	-	-	-	-	-	-	1	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	-	-	-	-	-	1	1	1	8	-	-	2	6
S. ATLANTIC	1	8	-	7	32	12	63	5	49	-	1	8	13
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	-	4	-	-	-	-	3	-	3	-	-	-	-
D.C.	-	1	-	-	-	-	-	-	-	-	-	-	-
Va.	-	1	-	7	3	1	5	3	7	-	1	7	-
W. Va.	-	-	-	-	3	-	1	1	26	-	-	-	6
N.C.	-	-	-	-	-	5	11	-	2	-	-	-	2
S.C.	-	1	-	-	-	1	8	-	2	-	-	-	3
Ga.	-	-	-	-	16	4	22	-	2	-	-	1	-
Fla.	1	1	-	-	10	1	13	1	7	-	-	-	2
E.S. CENTRAL	-	-	1	3	-	3	19	2	5	-	1	5	3
Ky.	-	-	-	1	-	-	1	-	1	-	1	5	3
Tenn.	-	-	1	2	-	1	8	1	2	-	-	-	-
Ala.	-	-	-	-	-	2	10	1	1	-	-	-	-
Miss.	-	-	-	-	-	-	-	-	1	-	-	-	-
W.S. CENTRAL	-	2	3	5	10	9	38	4	15	-	1	12	11
Ark.	-	-	-	-	-	-	2	-	2	-	-	-	-
La.	-	-	-	-	-	-	3	-	-	-	-	-	-
Okla.	-	-	-	-	-	1	4	-	-	-	-	-	-
Tex.	-	2	3	5	10	8	29	4	14	-	1	12	11
MOUNTAIN	1	2	-	-	5	4	17	2	10	-	-	2	2
Mont.	-	-	-	-	-	1	3	-	1	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	2	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	1	-
Colo.	-	1	-	-	-	3	8	1	1	-	-	-	-
N. Mex.	-	-	-	-	-	-	1	-	-	-	-	-	-
Ariz.	1	1	-	-	-	-	2	-	3	-	-	-	1
Utah	-	-	-	-	-	-	1	1	2	-	-	1	1
Nev.	-	-	-	-	5	-	2	-	1	-	-	-	-
PACIFIC	4	28	7	16	58	11	51	11	59	6	23	76	52
Wash.	-	1	5	5	1	2	6	3	15	2	3	4	11
Oreg.	-	2	-	-	-	1	14	-	-	-	-	-	-
Calif.	4	24	2	10	57	6	28	8	44	4	20	71	41
Alaska	-	-	-	-	-	2	3	-	-	-	-	-	-
Hawaii	-	1	-	1	-	-	-	-	-	-	-	1	-
Guam	U	-	U	-	2	U	-	U	-	U	U	-	-
P.R.	-	-	2	6	31	-	-	-	2	-	2	2	-
V.I.	-	-	-	-	1	-	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 6, 1982 and February 7, 1981 (5th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	3,214	2,914	481	2,046	6	7	40	2	13	364
NEW ENGLAND	59	79	6	53	-	2	4	-	-	3
Maine	-	1	1	4	-	-	-	-	-	3
N.H.	-	3	-	2	-	-	-	-	-	-
Vt.	-	1	-	3	-	1	2	-	-	-
Mass.	40	40	4	34	-	1	2	-	-	-
R.I.	5	9	1	7	-	-	-	-	-	-
Conn.	14	25	-	3	-	-	-	-	-	-
MID. ATLANTIC	447	466	101	316	-	-	4	-	-	2
Upstate N.Y.	29	48	13	55	-	-	1	-	-	-
N.Y. City	307	282	42	136	-	-	2	-	-	-
N.J.	38	52	12	39	-	-	1	-	-	-
Pa.	73	84	34	86	-	-	-	-	-	2
E.N. CENTRAL	104	191	88	340	-	-	3	-	-	32
Ohio	23	35	13	71	-	-	1	-	-	2
Ind.	23	13	23	55	-	-	-	-	-	3
Ill.	20	99	32	127	-	-	-	-	-	15
Mich.	29	32	17	68	-	-	2	-	-	-
Wis.	9	12	3	19	-	-	-	-	-	12
W.N. CENTRAL	61	50	8	38	4	-	2	1	1	127
Minn.	12	14	-	5	-	-	-	-	-	30
Iowa	1	3	-	3	-	-	1	-	-	39
Mo.	38	28	7	17	3	-	1	1	1	14
N. Dak.	2	-	1	2	-	-	-	-	-	15
S. Dak.	-	-	-	2	-	-	-	-	-	7
Nebr.	-	2	-	1	-	-	-	-	-	14
Kans.	8	3	-	8	1	-	-	-	-	8
S. ATLANTIC	902	722	80	407	-	-	3	1	8	55
Del.	2	1	-	1	-	-	-	-	-	-
Md.	55	55	-	58	-	-	1	1	5	2
D.C.	59	68	3	14	-	-	-	-	-	-
Va.	60	60	1	28	-	-	1	-	-	29
W. Va.	3	-	1	9	-	-	1	-	-	3
N.C.	75	55	19	64	-	-	-	-	3	-
S.C.	56	57	6	40	-	-	-	-	-	4
Ga.	191	179	16	78	-	-	-	-	-	14
Fla.	401	247	34	115	-	-	-	-	-	3
E.S. CENTRAL	248	222	48	190	-	1	6	-	3	27
Ky.	13	11	15	60	-	-	-	-	-	5
Tenn.	49	85	16	58	-	-	1	-	-	16
Ala.	80	71	7	62	-	1	5	-	3	6
Miss.	106	55	10	10	-	-	-	-	-	-
W.S. CENTRAL	905	692	35	153	1	1	2	-	-	56
Ark.	27	11	5	5	1	-	-	-	-	12
La.	168	108	13	43	-	-	-	-	-	1
Okla.	16	18	2	28	-	1	2	-	-	16
Tex.	694	555	15	77	-	-	-	-	-	27
MOUNTAIN	81	67	16	63	1	-	2	-	-	6
Mont.	-	1	1	3	-	-	-	-	-	3
Idaho	1	1	-	2	-	-	-	-	-	-
Wyo.	6	1	1	1	-	-	-	-	-	1
Colo.	25	15	-	8	-	-	-	-	-	-
N. Mex.	16	15	3	12	-	-	-	-	-	1
Ariz.	14	17	6	26	-	-	2	-	-	1
Utah	2	-	-	-	1	-	-	-	-	-
Nev.	17	17	5	11	-	-	-	-	-	-
PACIFIC	407	425	99	486	-	3	14	-	1	56
Wash.	-	10	8	24	-	-	-	-	-	-
Oreg.	18	10	2	9	-	-	-	-	-	-
Calif.	381	395	81	427	-	2	13	-	1	52
Alaska	1	1	-	8	-	-	-	-	-	4
Hawaii	7	9	8	18	-	1	1	-	-	-
Guam	-	-	U	-	-	U	-	U	-	-
P.R.	28	55	-	7	-	-	-	-	-	2
V.I.	-	-	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	-	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending February 6, 1982 (5th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	658	461	145	20	13	19	58
Boston, Mass.	194	128	42	9	6	9	32
Bridgeport, Conn.	51	39	11	1	-	-	5
Cambridge, Mass.	17	14	3	-	-	-	4
Fall River, Mass.	25	22	3	-	-	-	1
Hartford, Conn.	33	16	11	3	1	2	-
Lowell, Mass.	20	15	4	-	1	-	-
Lynn, Mass.	22	20	2	-	-	-	-
New Bedford, Mass.	25	20	3	-	-	2	-
New Haven, Conn.	60	39	11	3	2	5	4
Providence, R.I.	66	34	29	1	1	1	3
Somerville, Mass.	10	7	3	-	-	-	-
Springfield, Mass.	39	30	7	1	1	-	3
Waterbury, Conn.	36	31	4	1	-	-	3
Worcester, Mass.	60	44	12	1	1	-	3
MID. ATLANTIC	2,820	1,889	622	151	77	79	117
Albany, N.Y.	50	30	11	3	4	2	-
Allentown, Pa.	23	16	6	-	1	-	-
Buffalo, N.Y.	159	107	33	11	4	4	6
Camden, N.J.	46	25	16	1	2	2	1
Elizabeth, N.J.	29	19	6	2	2	-	1
Erie, Pa.†	43	33	6	2	1	1	2
Jersey City, N.J.	42	30	10	-	1	1	2
N.Y. City, N.Y.	1,533	1,011	352	88	40	42	56
Newark, N.J.	77	48	14	5	5	3	12
Paterson, N.J.§	32	26	-	3	-	3	-
Philadelphia, Pa.†	306	191	74	22	7	12	18
Pittsburgh, Pa.†	74	49	19	2	2	2	4
Reading, Pa.	29	25	4	-	-	-	3
Rochester, N.Y.	127	90	28	3	3	3	4
Schenectady, N.Y.	44	34	8	-	2	-	3
Scranton, Pa.†	25	19	5	1	-	-	1
Syracuse, N.Y.	79	58	16	1	1	3	1
Trenton, N.J.	44	33	9	1	-	1	-
Utica, N.Y.	19	13	3	3	-	-	2
Yonkers, N.Y.	39	32	2	3	2	-	1
E.N. CENTRAL	2,247	1,424	537	142	66	77	69
Akron, Ohio	75	47	16	6	3	3	-
Canton, Ohio	45	35	7	3	-	-	5
Chicago, Ill.	543	333	139	47	13	11	9
Cincinnati, Ohio	138	83	35	4	10	6	11
Cleveland, Ohio	156	99	38	4	4	11	1
Columbus, Ohio	165	94	55	8	3	5	9
Dayton, Ohio	134	78	39	7	4	6	2
Detroit, Mich.	220	132	48	23	7	10	3
Evansville, Ind.	48	33	5	5	4	1	3
Fort Wayne, Ind.	45	32	9	1	2	1	2
Gary, Ind.	14	8	3	2	-	1	2
Grand Rapids, Mich.	56	38	9	2	3	4	-
Indianapolis, Ind.	143	84	36	12	3	7	2
Madison, Wis.	58	39	11	2	5	1	5
Milwaukee, Wis.	140	100	26	7	3	4	3
Peoria, Ill.	24	17	5	-	1	1	1
Rockford, Ill.	46	34	8	2	-	2	-
South Bend, Ind.	45	31	13	-	-	1	5
Toledo, Ohio	94	66	23	4	-	1	4
Youngstown, Ohio	58	41	12	3	1	1	2
W.N. CENTRAL	755	522	154	35	18	26	25
Des Moines, Iowa	56	34	14	7	-	1	2
Duluth, Minn.	34	28	3	1	1	1	2
Kansas City, Kans.	42	26	10	3	1	2	2
Kansas City, Mo.	125	72	34	6	6	7	12
Lincoln, Nebr.	45	30	15	-	-	-	1
Minneapolis, Minn.	95	67	20	5	-	3	-
Omaha, Nebr.	98	72	19	1	2	4	3
St. Louis, Mo.	134	101	17	8	4	4	2
St. Paul, Minn.	51	36	12	2	1	-	-
Wichita, Kans.	75	56	10	2	3	4	1
S. ATLANTIC	1,132	656	303	82	35	55	40
Atlanta, Ga.	161	97	37	13	2	12	7
Baltimore, Md.	102	60	29	3	4	6	2
Charlotte, N.C.	75	33	27	9	2	4	2
Jacksonville, Fla.	100	64	24	3	6	3	1
Miami, Fla.	103	66	23	9	2	3	1
Norfolk, Va.	46	29	13	1	1	2	3
Richmond, Va.	86	50	29	4	3	-	8
Savannah, Ga.	49	26	15	2	2	4	3
St. Petersburg, Fla.	92	74	12	2	1	3	3
Tampa, Fla.	63	46	12	-	1	4	5
Washington, D.C.	217	93	66	35	10	12	4
Wilmington, Del.	38	18	16	1	1	2	1
E.S. CENTRAL	837	497	201	62	33	44	44
Birmingham, Ala.	178	106	44	17	4	7	3
Chattanooga, Tenn.	55	36	13	3	-	3	5
Knoxville, Tenn.	45	29	11	5	-	-	-
Louisville, Ky.	104	63	29	7	3	2	11
Memphis, Tenn.	223	129	44	13	15	22	8
Mobile, Ala.	59	38	11	4	5	1	6
Montgomery, Ala.	59	38	12	4	3	2	1
Nashville, Tenn.	114	58	37	9	3	7	10
W.S. CENTRAL	1,345	787	304	104	57	93	42
Austin, Tex.	60	45	8	4	2	1	4
Baton Rouge, La.	58	40	10	5	-	3	2
Corpus Christi, Tex.	46	29	14	1	1	1	1
Dallas, Tex.	194	116	49	16	8	5	2
El Paso, Tex.	79	39	19	3	5	13	7
Fort Worth, Tex.	101	57	23	8	4	9	[illegible]
Houston, Tex.	216	95	49	23	16	33	4
Little Rock, Ark.	75	47	17	3	3	5	4
New Orleans, La.	173	97	42	17	5	12	2
San Antonio, Tex.	186	115	47	9	9	6	7
Shreveport, La.	66	47	11	6	-	2	1
Tulsa, Okla.	91	60	15	9	4	3	5
MOUNTAIN	665	410	142	49	39	25	[illegible]
Albuquerque, N.Mex.	66	20	11	18	16	1	[illegible]
Colo. Springs, Colo.	30	19	9	-	1	1	[illegible]
Denver, Colo.	107	71	21	4	1	10	[illegible]
Las Vegas, Nev.	61	38	18	4	1	-	[illegible]
Ogden, Utah	20	12	5	1	1	1	[illegible]
Phoenix, Ariz.	183	118	41	11	9	4	[illegible]
Pueblo, Colo.	26	21	1	3	1	-	[illegible]
Salt Lake City, Utah	53	27	15	5	3	3	[illegible]
Tucson, Ariz.	119	84	21	3	6	5	[illegible]
PACIFIC	1,814	1,244	363	105	44	58	[illegible]
Berkeley, Calif.	24	17	6	-	1	-	[illegible]
Fresno, Calif.	70	43	19	4	-	4	[illegible]
Glendale, Calif.	34	27	7	-	-	-	[illegible]
Honolulu, Hawaii	63	42	9	3	6	3	[illegible]
Long Beach, Calif.	110	80	23	5	1	1	[illegible]
Los Angeles, Calif.	452	304	91	32	11	14	[illegible]
Oakland, Calif.	70	39	20	3	5	3	[illegible]
Pasadena, Calif.	58	42	10	3	1	2	[illegible]
Portland, Oreg.	125	79	21	6	5	14	[illegible]
Sacramento, Calif.	77	56	17	1	2	1	[illegible]
San Diego, Calif.	126	86	32	3	3	2	[illegible]
San Francisco, Calif.	188	124	41	20	2	1	[illegible]
San Jose, Calif.	193	146	28	11	4	4	[illegible]
Seattle, Wash.	125	82	25	11	2	5	[illegible]
Spokane, Wash.	62	48	11	-	1	2	[illegible]
Tacoma, Wash.	37	29	3	3	-	2	[illegible]
TOTAL	12,273††	7,890	2,771	750	382	476	[illegible]

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Reye Syndrome — Continued

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5. Consensus Conference: Diagnosis and treatment of Reye's syndrome. JAMA 1981; 26:2441-4.
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Epidemiologic Notes and Reports

A Technique for Rapid Epidemiologic Assessment — Nevada

In an effort to obtain information on perinatal health that could be useful in guiding local public health programs, a limited-sample birth survey was conducted in Clark County, Nevada, during 1981. By telephone interview, a public health nurse queried 200 women who had delivered babies 2-5 months previously. The first 100 interviews, conducted in May and June, involved mothers who had delivered in January and February, 1981; the remaining 100 interviews, in August and September, were with mothers who had delivered in June and July. Only mothers who delivered single, live-born infants were considered. The public health nurse searched local telephone directories for numbers to match the names and addresses of 1,271 mothers listed on birth records, found 425 numbers, and then attempted to telephone each mother. Of 201 mothers contacted, 1 declined to be interviewed.

The questionnaire used was a 1-page, standard-grid, modular form that could be administered in approximately 20 minutes. Questions sought information on such prenatal maternal activities as smoking and drinking habits and previous contraceptive use; the birth itself; and various postpartum maternal and infant events, such as illness and feeding choices.

Preliminary analysis of data obtained by the nurse indicated that 80 (40%) of the 200 mothers interviewed reported that they and/or their infants had had 1 or more infectious illnesses (as defined by the mother) during the first 30 days after delivery. Reported maternal illnesses were compatible with the following diagnoses: genital infections (11), respiratory infections (12), gastrointestinal illness (10), skin pustules/boils (8), mastitis (8), and cystitis (5). Illnesses reported for infants included skin pustules/boils (23), eye infections (32), respiratory infections (19), gastrointestinal illness (14), infection of the umbilical stump (5), and other (8). Although some of these conditions were self-limited, 27 mothers and 56 infants received physician care, usually including antibiotics.

Fifty-seven (28.5%) of the women reported smoking a total of approximately 234,000 cigarettes during their pregnancies, averaging 4,100 cigarettes per pregnancy or 15 per day. The neonates of these 57 smokers averaged 6.9 pounds, approximately 0.9 pounds less than the 7.8 pounds average birth weight of infants born to 143 mothers who denied smoking during pregnancy.

Although 102 (51%) of the women avoided all alcohol consumption during their pregnancy, 98 reported drinking 1 or more types of alcoholic beverages. The following beverages, in varied amounts, were consumed: beer (44 women), wine (72), and distilled spirits (38).

During the pregnancies under consideration, 188 (94%) women reported taking multivitamins; 87 (43.5%), Tylenol*; 55 (27.5%), iron; 51 (25.5%), Bendectin*; 30 (15%), calcium; 24 (12%), antihistamines; 17 (8.5%), aspirin; 16 (8%), penicillin; 12 (6%), other antibiotics; 8 (4%), sleep medication; and 9 (4.5%), other medications.

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*Inclusion of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Rapid Epidemiologic Assessment – Continued

Thirty-eight (19%) of the mothers reported exposure to diagnostic X rays during pregnancy: dental (23), chest (8), abdominal (3), pelvic (3), wrist (2). Three had occupational exposure to X rays.

Fifty mothers (25%) reported use of ultrasound imaging for management of their pregnancies, and 11 (5.5%) mothers (6 over age 30) had amniocentesis. More than 90% of the infants had been screened for metabolic defects.

Almost one-fifth of the women in this survey had their infants delivered by Cesarean section. For the 162 (81%) women who delivered vaginally, the average hospital stay was 2.1 days, hospital costs were $1,386, and the obstetrician fee was $817. For the 38 (19%) women who had Cesarean sections, the average hospital stay was 4.9 days, hospital costs were $3,767, and the obstetrician fee was $1,200.

None of the 200 birth certificates reported any congenital malformations. However, 21 of the mothers reported the following defects for their infants: cutaneous birth marks (6), congenital dislocation of the hip (3), feet turned in (4), feet turned out (1), cleft palate and lip (1), umbilical hernias (1), other hernias (1), urethra too small (1), sunken chest (1), ptosis of eyelids (1), and skin tags (1).

Breast-feeding was begun by 136 (68%) of the mothers. When they were contacted 2-5 months after delivery, 38 (19%) were still breast-feeding.

Of the 200 women interviewed, 191 (95.5%) had used contraceptives at some time. Of the 9 who stated they had never used any contraceptive before their recent pregnancies, 2 of these had since used contraceptives, and 1 other (a diabetic who delivered an 11 pound 8 ounce infant) planned to be sterilized soon. Overall, 30.5% of the 200 mothers and 16.5% of the 200 fathers had either been sterilized since the recent delivery or were planning to be sterilized. Sixty-eight mothers (34%) reported having had a total of 89 prior abortions; 35 of these were stated to have been induced.

Reported by OH Ravenholt, MD, Director, Clark County Health District, Las Vegas, Nevada; Office of the Centers Director, CDC.

Editorial Note: The Nevada birth survey demonstrates that certain types of potentially useful public health information can be obtained in a cost- and personnel-effective manner by a limited-sample telephone survey. Limitations to such a survey include: 1) only persons with telephones who were home during the day were included in the sample; hence, persons selected and contacted were not fully representative of the entire population, and 2) the small numbers limit the kinds of analyses that can be done. This type of survey may, however, allow rapid epidemiologic assessment of local situations, trends, and attitudes useful in planning local health programs and applying limited resources to the most essential areas. Also, the response rate in this type of survey is ordinarily high. In the Clark County survey, only 1 of 201 women contacted declined to be interviewed. In addition, the single-sheet, standard-grid questionnaire is relatively inexpensive to produce and administer, and data can be easily extracted.

One important finding in this survey was that postpartum infections remain a frequently perceived problem among Clark County mothers and their infants and deserve more intensive surveillance than ordinarily provided. Since newborns and mothers usually are discharged from hospitals before incubation periods for most microorganisms have elapsed, special surveillance and feedback of information to hospitals is essential for effective control of nosocomial infections among these 2 groups (*1*).

Data on the exposure of pregnant women to alcohol, drugs, radiation, and smoking can be used to improve educational programs. Smoking, now the most prevalent preventable cause

Rapid Epidemiologic Assessment – Continued

of death in the United States, and a foremost cause of reduced birth weight (*2*), is still widespread in this study population sample despite all evidence that "the risk of spontaneous abortion, fetal death, and neonatal death increases directly with increasing levels of maternal smoking during pregnancy" (*3*).

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Current Trends

Tuberculosis — United States 1981

A total of 27,412 cases of tuberculosis were reported to CDC in 1981. This figure, considered a provisional total until final corrected data for 1981 are received by the Tuberculosis Control Division, represents a decrease of 2.0% (571 cases) below the 1980 provisional total. The 1981 provisional case rate is 12.0/100,000 population, 3.2% lower than in 1980. However, the 1980 provisional data were based on a 53-week epidemiologic year, while the 1981 data cover a 52-week period (*1*). Based on these provisional numbers, the final tuberculosis case count for 1981 is expected to be comparable to that for 1980.

Before 1979 the number of tuberculosis cases decreased at a mean annual rate of 4.2%. In 1979 the decrease was 3.0%, and in 1980, the number of cases increased 0.3%. The provisional data for 1981 suggest that the secular trend that was previously downward, has leveled off.

Reported by Tuberculosis Control Div, Center for Prevention Svcs, CDC.

Reference

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Influenza Update — United States

Influenza virus isolates from patients with sporadic cases of respiratory illness continue to be reported. An influenza type B isolate, the first from Michigan this season, was obtained in Ann Arbor from a college student, who had onset of influenza in the last week of January. Further isolations of influenza A(H1N1) and B in mid and late January have been reported from Houston: the seasonal totals from Houston now include 7 type A and 68 type B isolates. Influenza type B virus was also isolated on January 27 from a 15-year-old patient with respiratory illness in Phoenix, Arizona. This was the first isolate of the season reported from Phoenix.

Tucson is the only locality in the United States with current respiratory illness that is reporting influenza isolates. Influenza B has been isolated sporadically this season in the following states: Arkansas, California, Colorado, Hawaii, Michigan, Nevada, New Mexico, New York, Texas, and Wisconsin. Influenza A(H1N1) has been isolated sporadically in California, New Jersey, Texas, and Utah. Influenza B isolates tested at CDC resemble B/Singapore/222/79, and influenza A(H1N1) isolates resemble A/England/333/80.

Tuberculosis – Continued

Reported by A Monto, MD, University of Michigan, Ann Arbor, W Hall, MD, N Hayner, MD, State Epidemiologist, Michigan Dept of Public Health; K Starko, MD, Maricopa County, J Sam PhD, J Sacks, State Epidemiologist, Arizona Dept of Health Svcs; P Glezen, MD, Influenza Research Center, Houston, C Webb, Jr, MD, State Epidemiologist, Texas Dept of Health; Immunization Div, Center for Prevention Svcs, Influenza Br, Viral Diseases Div, Center for Infectious Diseases, CDC.

Influenza — Japan

Japanese health authorities have reported to the World Health Organization extensive influenza activity among school-age children since mid-January. Influenza B strains (B/Singapore/222/79-like) have been isolated in 30 prefectures. In northern parts of Japan, small outbreaks of influenza type A(H3N2) have been occurring. Sporadic cases of influenza A(H1N1) have also been reported.

Reported by WHO Collaborating Influenza Center, Center for Infectious Diseases, CDC.

Notice to Readers

Marketing of Human Diploid Cell Strain Rabies Vaccine

Recently completed negotiations between Wistar Institute, Wyeth Laboratories, and Merieux Institute have resulted in an agreement whereby Merieux Institute is now able to market its vaccine directly to the private medical sector. Because some states may wish to continue their existing distribution systems, Merieux Institute representatives will be contacting state health departments within the next 2 weeks to determine how each state wishes to have the Merieux human diploid cell strain (HDCS) vaccine distributed.

For those states that wish to relinquish the distribution of vaccine in favor of private-sector sales, the vaccine will be available for purchase through either the Merieux offices in Miami, Florida, or a distribution point nearer the purchaser.

Reported by Enteric and Neurotropic Viral Diseases Br, Center for Infectious Diseases, CDC.

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MMWR

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Epidemiologic Notes and Reports

School Immunization Requirements for Measles — United States, 1982

The record low incidence of measles in the United States observed in 1981 (*1*) resulted from implementation of the measles elimination strategy. The primary component of this strategy is to achieve and maintain a very high percentage of immunity* to measles in the population. Because schools are the primary site of measles transmission in the United States, a major focus of the Measles Elimination Program has been to document that very high percentages of school-age children are vaccinated against measles. The importance of immunizing school-age children is reflected by the fact that in 1980, the most recent year for which age-specific data on measles cases are available, the school-age population 5-19 years old accounted for almost three-fourths (72.1%) of the measles cases (*2*).

An important means of assuring high immunization levels is enactment and enforcement of school immunization laws. The 2 major categories of school immunization laws are school-entrance laws and comprehensive school-attendance laws. School-entrance laws require documentation of measles immunity at the time of entry into kindergarten or first grade; students already in school when the law goes into effect do not have to comply. School-attendance laws, however, cover all students from kindergarten through grade 12.

In recent years, an increasing number of states have adopted comprehensive school-attendance laws requiring proof of measles immunity for all students from kindergarten through grade 12. In March 1979, only 17 states and the District of Columbia had such comprehensive laws, but by January 1982, this number had increased to 39 states and the District of Columbia (Figure 1). Of the remaining states, 10 have school-entry laws covering only kindergarten and first grade, and 1 has a law covering elementary school only. To ensure that students have been vaccinated with live-measles vaccine on or after their first birthday, most states require that dates of vaccination appear on school records.

Pennsylvania is one of 10 states that lack a comprehensive school immunization law. In the past 2 years, 8 measles outbreaks have occurred in Pennsylvania. In 1980, one such outbreak involved 811 cases in a 6-county area. Of 85,375 students enrolled in schools in these counties, 31,291 (36.7%) lacked adequate evidence of immunity to measles.

Although Pennsylvania comprises only 5% of the U.S. population, 607 (20.0%) of the provisional total of 3,032 measles cases reported in the United States for 1981 occurred in that state. The largest outbreak in the United States in 1981 occurred in Philadelphia, which reported 489 cases to CDC. Approximately 70% of these cases occurred among school-age

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*Measles immunity is estimated by either documented physician-diagnosed measles or receipt of live-measles vaccine on or after the first birthday.

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Measles – Continued

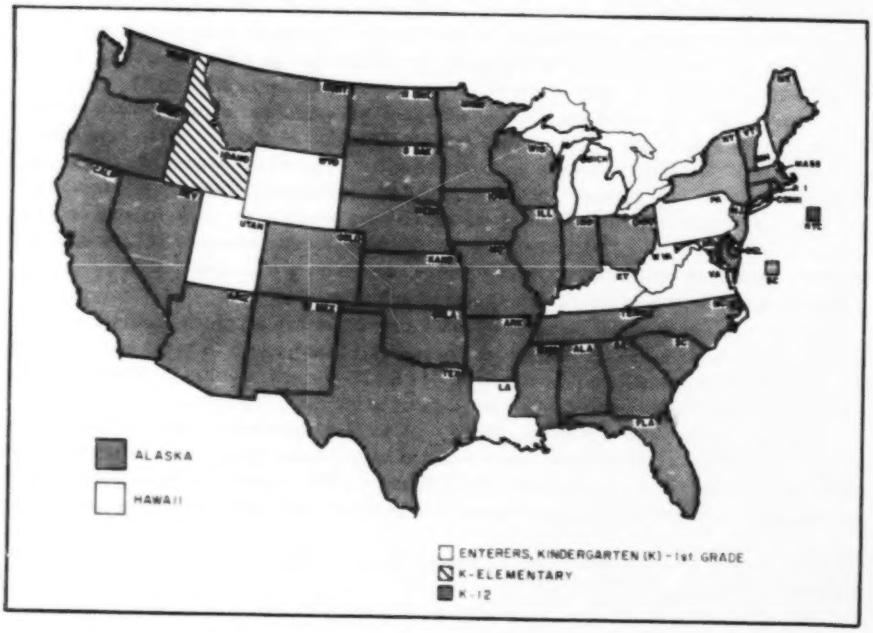
children (5-19 years). Another large outbreak, in which 156 confirmed cases were reported, occurred in Warren County, Pennsylvania; 86% of the cases were among school-age children. Of 8,315 students enrolled in Warren County schools, 3,210 (38.6%) lacked evidence of adequate immunity to measles. A countywide outbreak-control program was rapidly implemented in this outbreak. Philadelphia is currently engaged in a comprehensive vaccination campaign that involves reviewing the vaccination status of all students enrolled in city schools, holding vaccination clinics, and excluding students from school until they provide adequate evidence of immunity. Comprehensive immunization requirements covering kindergarten through 12th grade are currently being considered in Pennsylvania.

Reported by RG Sharrar, MD, Philadelphia, R Gens, MD, Acute Infectious Disease Div, EJ Witte, VMD, MPH, State Epidemiologist, Pennsylvania Dept of Health; Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: In recent years, the relationship of low measles incidence to comprehensive school laws has been demonstrated. In 1977 and 1978, low measles incidence was statistically associated with areas having comprehensive school laws that were rigorously enforced by exclusion of susceptible students from school (*3*). In the 1979-1980 school year, reporting areas in which laws covered all grades had lower measles incidence than did reporting areas in which laws covered only entry into kindergarten or first grade ($p = 0.05$, Mann Whitney U test) (*4*).

Vigorous enforcement of school immunization laws is the key to their effectiveness. The most effective means of enforcement is to exclude from school those students who have not provided documented evidence of immunity to measles. Experience with such enforcement

FIGURE 1. School immunization laws for measles, by state, January 31, 1982



Measles – Continued

programs indicates that necessary vaccinations are quickly obtained by most susceptible pupils and that exclusion from school for significant periods of time is uncommon (*5-8*).

Continued progress toward eliminating indigenous measles from the United States will be aided considerably if all states have comprehensive immunization laws covering all students. The experience in Pennsylvania indicates that an aggressive surveillance and outbreak-control effort alone cannot interrupt transmission. Enacting and strictly enforcing such comprehensive laws should receive high priority in public health efforts to control or eliminate measles and to maintain the absence of indigenous measles transmission.

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Cat Rabies Exposures in Iowa — 1981

In 1981, the number of confirmed cases of animal rabies in Iowa rose to 889—a 68% increase over the 1980 figure of 529 cases. Although skunks remain the most important endemic reservoir, a significant increase in the number of cases of rabies among dogs (49 in 1981 vs 22 in 1980) and cats (83 in 1981 vs 44 in 1980) was also observed. The Iowa State Department of Health was consulted on 661 animal-contact incidents, as a result of which 452 persons received postexposure therapy (Table 1). Of the treated group, 57 persons received penetrating bites from known rabid animals. Forty-two (74%) of these bite-associated exposures involved cats. This species was the most common source of human exposure to rabies in Iowa in 1981, as it was in the period 1977-1980 (Table 2). No cases of human rabies occurred in Iowa in 1981.

TABLE 1. Human postexposure rabies treatments — Iowa, 1981

Exposing animals	RABID Bite	RABID Nonbite	UNKNOWN Bite	UNKNOWN Nonbite	Total
Cat	42	55	78	17	192
Dog	6	92	31	9	138
Skunk	3	2	2	1	8
Cow	1	23	0	5	29
Other*	5	19	50	11	85
Total	57	191	161	43	452

*Bat, horse, rabbit, raccoon, sheep, ferret, groundhog, muskrat, squirrel, rat, coyote, and unknown.

Cat Rabies Exposures – Continued

Although intraspecies transmission of rabies in cats cannot be ruled out, it is presumed that most cases resulted from exposure to rabid skunks. Investigation of 64 rabid cats in Iowa in 1981 revealed that none had a history of rabies vaccination (only dogs are required by the Iowa State Code to be vaccinated). Investigation of 35 rabid dogs, on the other hand, revealed that the vaccination status of 1 was current and 3 had expired vaccinations.

The cost of this increased incidence of cat rabies is difficult to ascertain. A total of 6,234 doses of human diploid cell vaccine were shipped to Iowa in 1981. This suggests that the total number of human treatments was approximately 900(± 100). If the cost of 1 treatment is estimated at $350 for biologics plus $50 for administration, the total cost for prophylaxis alone ($400 times a minimum of 800 persons treated) would be $320,000. Costs of laboratory services, lost work days, transportation, livestock mortality, and veterinary fees would markedly increase this estimate.

Reported by V Seaton, DVM, Veterinary Diagnostic Laboratory, Iowa State University, Ames, WH Hausler, PhD, University Hygienic Laboratory, University of Iowa, Iowa City, RW Currier, DVM, LA Wintermeyer, MD, State Epidemiologist, Iowa State Dept of Health; Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: This report reflects the national experience with rabies in recent years. Reports of documented rabies in animals have doubled in the United States in the last 3 years: 3,298 for 1978 and over 7,000 for 1981. In 1981, for the first time, the number of

(Continued on page 73)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE	6th WEEK ENDING			CUMULATIVE, FIRST 6 WEEKS		
	February 13 1982	February 14 1981	MEDIAN 1977-1981	February 13 1982	February 14 1981	MEDIAN 1977-1981
Aseptic meningitis	58	33	38	467	370	297
Brucellosis	1	–	4	7	9	11
Encephalitis: Primary (arthropod-borne & unspec.)	9	17	14	72	84	67
Post-infectious	1	3	3	3	10	14
Gonorrhea: Civilian	14,980	16,528	18,419	107,242	113,405	112,178
Military	334	551	568	3,228	3,538	3,205
Hepatitis: Type A	332	312	546	2,167	2,507	3,005
Type B	267	247	290	1,833	1,854	1,677
Non A, Non B	21	N	N	136	N	N
Unspecified	140	148	168	954	1,113	1,050
Legionellosis	3	N	N	24	N	N
Leprosy	1	13	5	8	27	19
Malaria	10	17	8	62	140	53
Measles (rubeola)	9	35	296	59	203	1,167
Meningococcal infections: Total	45	122	71	318	542	336
Civilian	45	122	71	317	541	332
Military	–	–	–	1	1	1
Mumps	121	107	319	474	576	1,743
Pertussis	18	15	17	79	91	116
Rubella(German measles)	13	48	143	150	254	757
Syphilis (Primary & Secondary): Civilian	480	479	477	3,705	3,393	2,772
Military	4	11	11	57	43	40
Tuberculosis	424	475	551	2,470	2,479	2,649
Tularemia	1	–	2	7	11	11
Typhoid fever	3	4	5	42	47	35
Typhus fever, tick-borne (RMSF)	–	–	2	13	6	6
Rabies, animal	54	96	51	419	565	296

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	–
Botulism	10	Paralytic	–
Cholera	1	Psittacosis (Ohio 1, La. 1)	8
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus	5
Leptospirosis (Upstate N.Y. 1, Mo. 1)	9	Trichinosis	13
Plague	1	Typhus fever, flea-borne (endemic, murine) (Ala. 1)	1

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 13, 1982 and February 14, 1981 (6th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS Primary	ENCEPHALITIS Post-infectious	GONORRHEA (Civilian)	GONORRHEA (Civilian)	HEPATITIS (Viral), by type A	HEPATITIS (Viral), by type B	HEPATITIS (Viral), by type NA,NB	HEPATITIS (Viral), by type Unspecified	LEGIONELLOSIS	LEPROSY
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	58	7	72	3	107,242	113,405	332	267	21	140	3	8
NEW ENGLAND	4	-	1	-	2,339	2,973	9	13	1	16	-	-
Maine	2	-	-	-	130	130	-	1	-	-	-	-
N.H.	-	-	-	-	97	107	2	4	-	1	-	-
Vt.	-	-	-	-	61	49	-	-	-	-	-	-
Mass.	1	-	1	-	915	1,181	2	4	-	15	-	-
R.I.	1	-	-	-	152	129	4	1	-	-	-	-
Conn.	-	-	-	-	984	1,377	1	3	1	-	-	-
MID. ATLANTIC	6	-	12	-	12,466	12,480	46	41	5	12	-	1
Upstate N.Y.	2	-	6	-	1,844	1,865	18	18	1	3	-	-
N.Y. City	-	-	3	-	5,628	4,725	9	12	-	7	-	-
N.J.	1	-	-	-	1,983	2,769	19	11	4	2	-	-
Pa.	3	-	3	-	3,011	3,121	-	-	-	-	-	1
E.N. CENTRAL	11	-	19	1	13,866	17,949	85	55	3	23	2	-
Ohio	5	-	3	-	4,731	7,239	7	14	3	11	2	-
Ind.	1	-	7	1	1,938	1,414	31	10	-	8	-	-
Ill.	-	-	-	-	1,979	3,813	8	5	-	-	-	-
Mich.	5	-	7	-	3,871	3,929	34	24	-	4	-	-
Wis.	-	-	2	-	1,347	1,554	5	2	-	-	-	-
W.N. CENTRAL	5	1	3	-	5,137	5,805	16	15	2	2	-	-
Minn.	-	-	-	-	812	911	9	1	-	-	-	-
Iowa	1	-	2	-	514	531	1	2	1	-	-	-
Mo.	4	1	1	-	2,283	2,693	3	3	-	2	-	-
N. Dak.	-	-	-	-	60	53	-	-	-	-	-	-
S. Dak.	-	-	-	-	166	147	-	1	-	-	-	-
Nebr.	-	-	-	-	286	429	-	1	-	-	-	-
Kans.	-	-	-	-	1,016	1,041	3	7	1	-	-	-
S. ATLANTIC	9	3	8	1	29,099	28,443	27	54	5	24	1	-
Del.	-	-	-	-	368	479	-	-	-	1	-	-
Md.	-	-	4	-	3,729	2,945	3	7	-	1	-	-
D.C.	-	-	-	-	1,289	1,844	-	2	-	-	-	-
Va.	3	2	2	-	2,325	2,839	1	4	2	2	1	-
W. Va.	-	-	-	-	242	382	3	-	-	-	-	-
N.C.	1	-	1	-	4,822	4,693	2	7	-	4	-	-
S.C.	-	-	-	-	2,546	2,533	2	6	-	6	-	-
Ga.	-	-	-	-	5,189	6,050	2	15	1	2	-	-
Fla.	5	1	1	1	8,589	6,678	14	13	2	8	-	-
E.S. CENTRAL	3	-	4	-	8,881	9,301	17	22	1	3	-	-
Ky.	-	-	-	-	1,158	1,194	8	2	-	2	-	-
Tenn.	1	-	3	-	3,462	3,457	5	16	1	1	-	-
Ala.	2	-	1	-	2,533	3,083	1	3	-	-	-	-
Miss.	-	-	-	-	1,728	1,567	3	1	-	-	-	-
W.S. CENTRAL	11	-	5	-	16,291	16,844	102	57	-	43	-	-
Ark.	-	-	-	-	1,397	1,088	3	3	-	4	-	-
La.	-	-	-	-	2,637	2,573	18	6	-	4	-	-
Okla.	3	-	3	-	1,689	1,612	5	12	-	1	-	-
Tex.	8	-	2	-	10,568	11,571	76	36	-	34	-	-
MOUNTAIN	-	-	5	1	3,996	4,416	25	6	4	17	-	-
Mont.	-	-	-	-	188	139	-	-	-	-	-	-
Idaho	-	-	-	-	177	185	1	-	1	-	-	-
Wyo.	-	-	-	-	121	112	1	-	-	-	-	-
Colo.	-	-	1	1	1,140	1,229	5	3	-	6	-	-
N. Mex.	-	-	-	-	497	521	8	1	1	-	-	-
Ariz.	-	-	1	-	1,028	1,382	9	2	1	5	-	-
Utah	-	-	-	-	159	202	1	-	-	4	-	-
Nev.	-	-	3	-	686	646	-	-	1	2	-	-
PACIFIC	9	3	15	-	15,167	15,194	5	4	-	-	-	7
Wash.	-	-	2	-	1,499	1,221	4	1	-	-	-	1
Oreg.	-	-	-	-	1,045	1,295	-	1	-	-	-	-
Calif.	U	3	13	-	11,920	11,918	U	U	U	U	U	3
Alaska	1	-	-	-	422	402	1	1	-	-	-	-
Hawaii	8	-	-	-	281	358	-	1	-	-	-	3
Guam	U	-	-	-	-	27	U	U	U	U	U	-
P.R.	-	-	-	-	247	379	1	1	-	1	-	-
V.I.	-	-	-	-	29	-	-	1	-	-	-	-
Pac. Trust Terr.	U	-	-	-	-	64	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 13, 1982 and February 14, 1981 (6th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	10	62	9	59	203	45	318	121	74	18	13	150	254
NEW ENGLAND	2	5	–	3	7	2	14	8	42	1	2	8	42
Maine	–	–	–	–	–	–	2	4	13	–	–	–	23
N.H.	–	–	–	1	2	1	4	1	5	–	1	7	17
Vt.	–	–	–	2	1	–	1	–	3	–	–	–	–
Mass.	1	3	–	–	–	–	1	2	15	1	1	1	2
R.I.	1	1	–	–	–	–	1	–	3	–	–	–	–
Conn.	–	1	–	–	4	1	5	1	3	–	–	–	–
MID. ATLANTIC	4	6	4	19	58	13	50	6	31	–	1	8	40
Upstate N.Y.	2	2	4	13	34	3	11	4	15	–	1	6	15
N.Y. City	2	4	–	5	7	5	13	–	6	–	–	2	8
N.J.	–	–	–	–	7	1	14	–	3	–	–	–	15
Pa.	–	–	–	1	10	4	12	2	7	–	–	–	2
E.N. CENTRAL	2	7	3	4	7	8	29	77	216	8	3	19	54
Ohio	1	1	–	–	–	2	10	63	123	–	–	–	–
Ind.	–	–	–	1	–	–	1	1	9	2	–	1	18
Ill.	–	–	2	2	1	2	5	4	17	4	–	8	11
Mich.	1	5	–	–	6	4	13	4	48	1	1	2	8
Wis.	–	1	1	1	–	–	–	5	19	1	2	8	17
W.N. CENTRAL	–	1	–	–	–	2	15	9	25	2	4	9	14
Minn.	–	–	–	–	–	–	4	3	3	2	–	1	2
Iowa	–	–	–	–	–	–	1	2	7	–	–	–	–
Mo.	–	1	–	–	–	1	7	–	3	–	4	6	–
N. Dak.	–	–	–	–	–	1	2	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	–	–	–
Nebr.	–	–	–	–	–	–	–	–	–	–	–	–	–
Kans.	–	–	–	–	–	–	1	4	12	–	–	2	12
S. ATLANTIC	–	8	1	8	52	11	74	11	60	2	–	8	20
Del.	–	–	–	–	–	–	–	–	–	–	–	–	–
Md.	–	4	–	–	–	–	3	2	5	–	–	–	–
D.C.	–	1	–	–	–	–	–	–	–	–	–	–	–
Va.	–	1	1	8	3	–	5	–	7	–	–	7	–
W. Va.	–	–	–	–	3	1	2	3	29	1	–	–	8
N.C.	–	–	–	–	–	3	14	1	3	–	–	–	2
S.C.	–	1	–	–	–	2	10	–	2	–	–	–	3
Ga.	–	–	–	–	25	1	23	–	2	–	–	1	2
Fla.	–	1	–	–	21	4	17	5	12	1	–	–	5
E.S. CENTRAL	–	–	–	3	–	1	20	1	6	1	–	5	3
Ky.	–	–	–	1	–	–	1	–	1	–	–	5	3
Tenn.	–	–	–	2	–	1	9	–	2	–	–	–	–
Ala.	–	–	–	–	–	–	10	–	1	–	–	–	–
Miss.	–	–	–	–	–	–	–	1	2	1	–	–	–
W.S. CENTRAL	1	3	1	6	11	5	44	6	22	3	1	13	16
Ark.	–	–	–	–	–	1	4	–	2	–	–	–	–
La.	–	–	–	–	–	–	3	–	–	–	–	–	1
Okla.	–	–	–	–	–	–	4	–	–	–	–	–	–
Tex.	1	3	1	6	11	4	33	6	20	3	1	13	15
MOUNTAIN	1	3	–	–	7	3	21	2	12	1	2	4	7
Mont.	–	–	–	–	–	–	3	–	1	–	–	–	–
Idaho	–	–	–	–	–	1	2	–	2	–	–	–	–
Wyo.	–	–	–	–	–	–	–	1	1	–	–	1	–
Colo.	1	2	–	–	–	2	10	–	1	–	–	–	4
N. Mex.	–	–	–	–	–	–	1	–	–	–	–	–	–
Ariz.	–	1	–	–	–	–	2	–	3	1	–	–	1
Utah	–	–	–	–	–	–	1	1	3	–	1	2	2
Nev.	–	–	–	–	7	–	2	–	1	–	1	1	–
PACIFIC	–	29	–	16	61	–	51	1	60	–	–	76	58
Wash.	–	2	–	5	1	–	6	–	15	–	–	4	14
Oreg.	–	2	–	–	–	–	14	–	–	–	–	–	–
Calif.	U	24	U	10	60	U	28	U	44	U	U	71	44
Alaska	–	–	–	–	–	–	3	1	1	–	–	–	–
Hawaii	–	1	–	1	–	–	–	–	–	–	–	1	–
Guam	U	–	U	–	3	U	–	U	–	U	U	–	–
P.R.	1	1	4	10	35	1	1	1	3	–	–	2	–
V.I.	–	–	–	–	2	–	–	–	–	–	–	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 13, 1982 and February 14, 1981 (6th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	3,705	3,393	424	2,470	7	3	42	-	13	419
NEW ENGLAND	73	86	15	68	-	-	4	-	-	4
Maine	-	1	2	6	-	-	-	-	-	4
N.H.	-	3	3	5	-	-	-	-	-	-
Vt.	-	1	-	3	-	-	2	-	-	-
Mass.	50	46	9	43	-	-	2	-	-	-
R.I.	5	10	-	7	-	-	-	-	-	
Conn.	18	25	1	4	-	-	-	-	-	-
MID. ATLANTIC	514	551	94	410	-	2	5	-	-	3
Upstate N.Y.	34	48	24	79	-	-	1	-	-	1
N.Y. City	346	336	19	155	-	2	4	-	-	-
N.J.	50	68	36	75	-	-	-	-	-	-
Pa.	84	99	15	101	-	-	-	-	-	2
E.N. CENTRAL	111	201	74	414	-	-	3	-	-	42
Ohio	23	40	14	85	-	-	1	-	-	2
Ind.	23	15	8	63	-	-	-	-	-	4
Ill.	20	99	27	154	-	-	-	-	-	16
Mich.	33	33	19	87	-	-	2	-	-	-
Wis.	12	14	6	25	-	-	-	-	-	20
W.N. CENTRAL	72	58	10	48	4	-	2	-	1	143
Minn.	13	17	5	10	-	-	-	-	-	35
Iowa	1	3	-	3	-	-	1	-	-	46
Mo.	45	32	2	19	3	-	1	-	1	14
N. Dak.	2	-	-	2	-	-	-	-	-	16
S. Dak.	-	-	-	2	-	-	-	-	-	7
Nebr.	-	2	-	1	-	-	-	-	-	15
Kans.	11	4	3	11	1	-	-	-	-	10
S. ATLANTIC	1,052	887	122	529	1	-	3	-	8	64
Del.	2	1	5	6	-	-	-	-	-	-
Md.	61	67	20	78	-	-	1	-	5	2
D.C.	72	81	3	17	-	-	-	-	-	-
Va.	83	88	-	28	1	-	1	-	-	33
W. Va.	3	1	3	12	-	-	1	-	-	4
N.C.	89	63	34	98	-	-	-	-	3	-
S.C.	65	68	4	44	-	-	-	-	-	4
Ga.	221	218	13	91	-	-	-	-	-	18
Fla.	456	300	40	155	-	-	-	-	-	3
E.S. CENTRAL	295	258	37	227	-	1	7	-	3	30
Ky.	16	12	8	68	-	-	-	-	-	6
Tenn.	75	98	16	74	-	1	2	-	-	16
Ala.	98	84	13	75	-	-	5	-	3	8
Miss.	106	64	-	10	-	-	-	-	-	-
W.S. CENTRAL	1,053	797	45	198	1	-	2	-	-	71
Ark.	34	11	5	10	1	-	-	-	-	15
La.	172	108	-	43	-	-	-	-	-	2
Okla.	19	19	9	37	-	-	2	-	-	21
Tex.	828	659	31	108	-	-	-	-	-	33
MOUNTAIN	107	76	8	71	1	-	2	-	-	6
Mont.	-	1	1	4	-	-	-	-	-	3
Idaho	9	1	-	2	-	-	-	-	-	-
Wyo.	7	1	1	2	-	-	-	-	-	1
Colo.	30	22	3	11	-	-	-	-	-	-
N. Mex.	22	15	-	12	-	-	-	-	-	1
Ariz.	17	17	2	28	-	-	2	-	-	1
Utah	2	-	-	-	1	-	-	-	-	-
Nev.	20	19	1	12	-	-	-	-	-	-
PACIFIC	428	479	19	505	-	-	14	-	1	56
Wash.	11	14	-	24	-	-	-	-	-	-
Oreg.	22	11	10	19	-	-	-	-	-	-
Calif.	381	439	U	427	-	U	13	U	1	52
Alaska	2	1	-	8	-	-	-	-	-	4
Hawaii	12	14	9	27	-	-	1	-	-	-
Guam	-	-	U	-	-	U	-	U	-	-
P.R.	67	74	-	7	-	-	-	-	-	2
V.I.	-	-	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	-	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending February 13, 1982 (6th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	653	417	170	32	16	18	52
Boston, Mass.	184	106	49	13	4	12	18
Bridgeport, Conn.	47	29	15	3	-	-	5
Cambridge, Mass.	19	15	2	1	-	1	-
Fall River, Mass.	19	16	1	2	-	-	1
Hartford, Conn.	64	42	17	-	5	-	3
Lowell, Mass.	16	10	4	-	-	2	-
Lynn, Mass.	23	17	5	1	-	-	-
New Bedford, Mass.	19	13	6	-	-	-	-
New Haven, Conn.	30	23	4	1	2	-	3
Providence, R.I.	58	39	16	3	-	-	8
Somerville, Mass.	10	7	3	-	-	-	3
Springfield, Mass.	61	32	23	2	2	2	5
Waterbury, Conn.	32	17	10	3	2	-	3
Worcester, Mass.	71	51	15	3	1	1	3
MID. ATLANTIC	2,747	2,207	289	90	67	67	120
Albany, N.Y.	58	42	7	3	1	5	-
Allentown, Pa.	25	18	7	-	-	-	-
Buffalo, N.Y.	150	105	30	2	5	8	12
Camden, N.J.	25	15	8	2	-	-	-
Elizabeth, N.J.	20	16	4	-	-	-	-
Erie, Pa.†	52	35	14	3	-	-	4
Jersey City, N.J.	38	25	8	2	1	2	1
N.Y. City, N.Y.§	1,503	1,372	13	26	31	39	52
Newark, N.J.	67	28	20	7	6	1	7
Paterson, N.J.	20	11	3	4	2	-	2
Philadelphia, Pa.†	326	211	82	22	9	2	24
Pittsburgh, Pa.†	44	31	10	2	1	-	2
Reading, Pa.	42	32	10	-	-	-	4
Rochester, N.Y.	119	84	20	4	4	7	10
Schenectady, N.Y.	33	26	5	1	1	-	-
Scranton, Pa.†	25	18	5	1	1	-	1
Syracuse, N.Y.	112	73	28	6	3	2	-
Trenton, N.J.	34	26	6	1	1	-	-
Utica, N.Y.	24	16	6	2	-	-	1
Yonkers, N.Y.	30	23	3	2	1	1	-
E.N. CENTRAL	2,446	1,739	422	105	73	91	66
Akron, Ohio	48	39	6	1	-	2	-
Canton, Ohio	47	28	13	4	-	2	-
Chicago, Ill.§	599	520	10	11	21	21	11
Cincinnati, Ohio	149	96	36	8	4	5	10
Cleveland, Ohio	169	97	48	11	8	5	4
Columbus, Ohio	135	71	39	11	6	8	2
Dayton, Ohio	116	81	26	5	2	2	4
Detroit, Mich.	328	202	75	19	15	17	2
Evansville, Ind.	52	33	16	-	1	2	1
Fort Wayne, Ind.	60	38	14	2	2	4	7
Gary, Ind.	19	7	4	5	2	1	-
Grand Rapids, Mich.	42	28	8	3	1	2	2
Indianapolis, Ind.	189	123	41	11	5	9	1
Madison, Wis.	47	32	7	2	2	4	4
Milwaukee, Wis.	123	97	22	1	1	2	1
Peoria, Ill.	33	22	8	-	2	1	3
Rockford, Ill.	32	23	5	4	-	-	5
South Bend, Ind.	74	50	17	5	-	2	4
Toledo, Ohio	131	105	21	2	1	2	4
Youngstown, Ohio	53	47	6	-	-	-	1
W.N. CENTRAL	775	517	159	44	24	31	30
Des Moines, Iowa	69	48	15	4	-	2	1
Duluth, Minn.	21	13	5	2	1	-	1
Kansas City, Kans.	31	20	4	4	-	3	4
Kansas City, Mo.	128	82	37	3	2	4	3
Lincoln, Nebr.	34	29	4	1	-	-	2
Minneapolis, Minn.	94	64	17	8	-	5	2
Omaha, Nebr.	64	41	16	1	3	3	1
St. Louis, Mo.	191	123	33	12	13	10	8
St. Paul, Minn.	63	48	9	2	3	1	4
Wichita, Kans.	80	49	19	7	2	3	4

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					
	ALL AGES	≥65	45-64	25-44	1-24	<1
S. ATLANTIC	1,259	751	305	110	45	48
Atlanta, Ga.	151	97	35	13	2	4
Baltimore, Md.	216	137	46	20	10	3
Charlotte, N.C.	72	48	14	6	3	3
Jacksonville, Fla.	93	50	26	7	4	6
Miami, Fla.	96	51	27	11	3	4
Norfolk, Va.	58	30	17	7	2	2
Richmond, Va.	69	34	22	4	2	7
Savannah, Ga.	35	23	10	2	-	-
St. Petersburg, Fla.	89	72	15	1	1	-
Tampa, Fla.	76	42	21	3	8	2
Washington, D.C.	226	119	55	28	8	16
Wilmington, Del.	78	50	17	8	2	1
E.S. CENTRAL	755	466	199	46	17	27
Birmingham, Ala.	138	85	34	6	4	9
Chattanooga, Tenn.	74	42	23	5	2	2
Knoxville, Tenn.	51	37	9	3	1	1
Louisville, Ky.	83	49	25	4	1	4
Memphis, Tenn.	173	113	46	11	2	1
Mobile, Ala.	76	41	20	7	2	6
Montgomery, Ala.	47	32	10	4	1	-
Nashville, Tenn.	113	67	32	6	4	4
W.S. CENTRAL	1,485	885	370	115	52	63
Austin, Tex.	54	35	11	3	2	3
Baton Rouge, La.	50	26	17	4	1	2
Corpus Christi, Tex.	34	20	6	1	3	4
Dallas, Tex.	197	127	46	9	5	10
El Paso, Tex.	53	29	19	3	1	1
Fort Worth, Tex.	111	75	22	4	3	7
Houston, Tex.	450	232	129	49	28	12
Little Rock, Ark.	62	36	14	4	1	7
New Orleans, La.	118	70	27	13	5	3
San Antonio, Tex.	172	112	39	13	2	6
Shreveport, La.	75	55	15	3	1	1
Tulsa, Okla.	109	70	25	7	-	7
MOUNTAIN	652	409	153	44	28	18
Albuquerque, N.Mex.	70	37	22	8	3	-
Colo. Springs, Colo.	27	21	4	2	-	-
Denver, Colo.	146	88	36	10	9	3
Las Vegas, Nev.	89	52	22	6	7	2
Ogden, Utah	14	8	5	1	-	-
Phoenix, Ariz.	142	95	27	7	3	10
Pueblo, Colo.	19	16	2	-	1	-
Salt Lake City, Utah	40	20	10	4	3	3
Tucson, Ariz.	105	72	25	6	2	-
PACIFIC	1,909	1,273	394	121	56	61
Berkeley, Calif.	17	14	3	-	-	-
Fresno, Calif.	109	70	22	10	-	7
Glendale, Calif.	26	21	4	1	-	-
Honolulu, Hawaii	87	53	25	2	1	6
Long Beach, Calif.	111	71	21	7	6	6
Los Angeles, Calif.	597	386	131	44	19	17
Oakland, Calif.	78	55	17	4	2	-
Pasadena, Calif.	18	15	2	1	-	-
Portland, Oreg.§	136	117	2	4	4	6
Sacramento, Calif.	53	35	13	3	1	1
San Diego, Calif.	147	87	40	12	5	2
San Francisco, Calif.	128	82	26	11	2	7
San Jose, Calif.	148	98	34	8	5	3
Seattle, Wash.	140	100	24	7	7	2
Spokane, Wash.	47	28	14	1	2	2
Tacoma, Wash.	67	41	16	6	2	2
TOTAL	12,681††	8,664	2,461	707	378	424

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Cat Rabies Exposures – Continued

rabid cats outnumbered the number of rabid dogs, by approximately 20%. Control of rabies among wild animals is not technically or fiscally practical at this time. Immunization of pets represents the single most important control measure because it is effective in preventing disease and subsequent human exposures. The absence of human rabies in Iowa potentially underscores the efficacy of postexposure therapy using the combination of human rabies immune globulin and human diploid cell strain rabies vaccine.

TABLE 2. Summary of rabies incidence, exposure consultations at the State Department of Health, and number of persons treated – Iowa, 1977-1981

Year	Rabid animals	Consultations	Persons treated	Biting rabid animals resulting in treatment
1977	136	247	74	12*
1978	147	265	146	11†
1979	198	353	207	28§
1980	529	571	349	48¶
1981	889	661	452	57**
Total	1,899	2,097	1,228	156

*10 cats, 1 dog, 1 skunk.

†8 cats, 3 dogs.

§21 cats, 2 dogs, 3 skunks, 1 bat, 1 raccoon.

¶33 cats, 2 dogs, 4 skunks, 5 bats, 1 cow, 2 raccoons, 1 fox.

**42 cats, 6 dogs, 3 skunks, 2 bats, 1 cow, 1 horse, 1 rabbit, 1 muscrat.

Influenza Update – United States

Influenza A(H1N1) virus has been isolated from 1 of 2 patients surveyed in a focal outbreak of influenza at a juvenile correction institution in Sacramento, California. An estimated 40%-50% of the 100 inmates were affected. An additional 4 isolates of influenza A(H1N1) virus and 3 of type B virus, all associated with geographically scattered cases, were reported from California. Two influenza A(H1N1) viruses and 1 type B virus have been isolated in Oregon, the first for that state this season. The isolations were associated with sporadic influenza cases occurring in late January or early February. Influenza activity in Tucson, Arizona, has declined. School absenteeism in Tucson has returned to normal levels, and influenza virus was not isolated there during the first 2 weeks of February. The largest number of virus isolations continues to be reported from Houston, Texas, where the Influenza Research Center has identified a total of 159 type B and 21 type A(H1N1) influenza viruses this season through active clinical surveillance. Despite the large number of isolations, no outbreaks of influenza have been documented in Houston.

Reported by P Horn, MD, Sacramento County Health Dept, J Chin, MD, State Epidemiologist, California State Dept of Health Svcs; W Murphy, PhD, J Googins, MD, State Epidemiologist, Oregon Dept of Human Resources; R Worrell, RN, P Noland, MD, Pima County Health Dept, L Minnich, G Ray, MD, University Hospital, Tucson, J Sacks, MD, Acting State Epidemiologist, Arizona Dept of Health Svcs; P Glezen, MD, Influenza Research Center, Baylor College of Medicine, Houston, C Webb Jr, MD, State Epidemiologist, Texas Dept of Health; WHO Collaborating Center for Influenza, Center for Infectious Diseases, CDC.

Surveillance Summary

Human Plague — United States, 1981

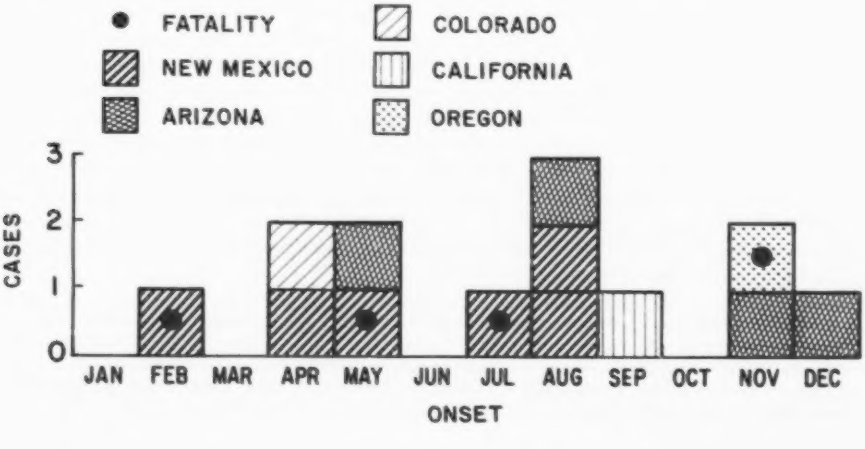
For 1981, 13 cases of human plague, 4 of them fatal, were reported from 5 states: Arizona (4), California (1), Colorado (1), Oregon (1 fatal), New Mexico (6, 3 fatal) (Figure 2). Twelve cases were confirmed at CDC by fluorescent antibody testing and by bacteriologic identification and characterization; 1 case was confirmed serologically. The patients ranged in age from 2 to 72 years with a mean age of 38.7 years. Seven patients (54%) were male, 6 were white, 6 were American Indian (5 Navajo, 1 Hopi), and 1 was Asian. The clinical manifestations included bubonic plague (5 patients), septicemic plague (5), septicemic with confirmed secondary pneumonic plague (2), and presentation unspecified (1).

The various modes of infection were flea bite (5 cases), skinning an infected bobcat (1), rabbit hunting (1), bite of an infected domestic cat (1), and undetermined (5). The 5 cases acquired by flea bite occurred in relation to epizootic plague among prairie dogs (*Cynomys gunnisoni*) and rock squirrels (*Spermophilus variegatus*). Two patients with unknown source of infection resided in areas where an epizootic of plague was occurring in prairie dogs.

From 1970 through 1981, enzootic and epizootic plague among rodents and carnivores was documented in 12 western states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming. Human plague cases were reported from 8 of these states. The geographic distribution of 136 human cases in the period 1970-1981 is shown in Figure 3, and the totals by state for the same period are shown in Table 3.

Reported by MM Ettenger, MD, Dept of Internal Medicine, Gallup Indian Medical Center, J Porvoznik, MD, Indian Health Svcs, MR Skeels, PhD, Scientific Laboratories Div, JM Mann, MD, Chief of Communicable Diseases, Epidemiology, and Control, Health Svcs Div, New Mexico Health and Environment Dept, New Mexico; J Leedom, MD, P Heseltine, MD, Los Angeles County USC Medical Center, SL Fannin, MD, Acute Communicable Disease Control, County of Los Angeles Dept of Health Svcs, J Chin, MD, State Epidemiologist, Dept of Health Svcs, California; JK Emerson, DVM, MPH, State Public Health Veterinarian, RS

FIGURE 2. Temporal and geographic distribution and clinical outcome of 13 human plague cases — United States, 1981



Human Plague – Continued

Hopkins, MD, State Epidemiologist, State Dept of Health, Colorado; LP Williams, Jr, DVM, MPH, State Public Health Veterinarian, Dept of Human Resources, Oregon; JJ Sacks, MD, State Epidemiologist (Acting), State Dept of Health Svcs, Arizona; Field Svcs Div, Epidemiology Program Office, Vectorborne Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Plague is a bacterial disease caused by the organism, *Yersinia pestis*. It is usually contracted from the bite of an infected wild-rodent flea but can also occur as the result of direct contact exposure to infected rodents, rabbits, and carnivores. The infection can be spread from person to person by patients with pulmonary involvement with *Y. pestis*. Although this was most likely a major cause of rapid dissemination during great epidemics such as occurred in China (*1*), pneumonic plague is seen infrequently in modern times. Moreover,

FIGURE 3. Geographic distribution of human plague cases, by county, United States, 1970-1981

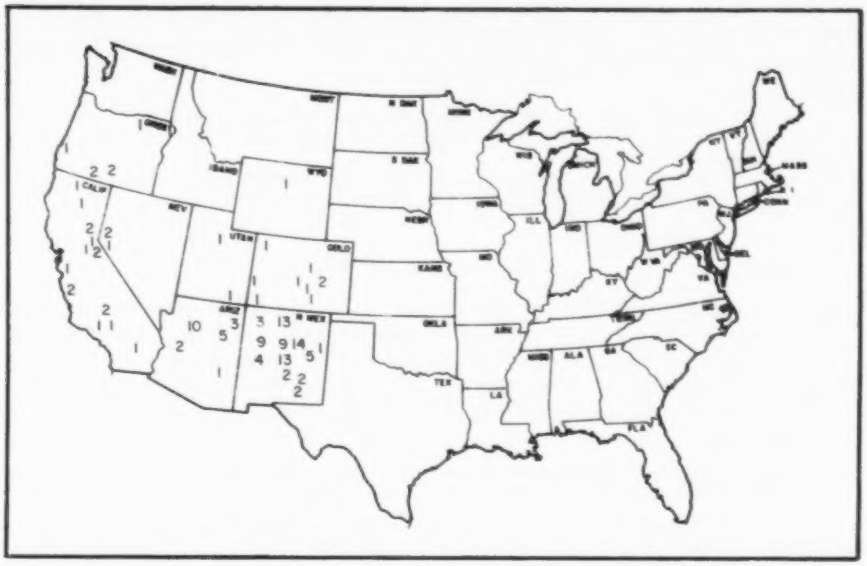


TABLE 3. Reported cases of human plague, by state, 1970-1981

State	Number of Cases	Percent
New Mexico	77	56.6
Arizona	21	15.4
California	16	11.8
Colorado	9	6.6
Oregon	7	5.2
Nevada	3	2.2
Utah	2	1.5
Wyoming	1	0.7
TOTAL	136	100.0

Human Plague – Continued

today plague pneumonia usually results from extension of septicemia to involve the lungs (secondary plague pneumonia) rather than from direct seeding of the lungs by inhaled organisms (primary plague pneumonia). Of 105 cases of human plague reported to CDC from 1970 to 1979, 82% were associated with an antecedent flea bite (*2*). In this same period, 19 cases (18%) of pneumonic plague secondary to septicemia were reported. Since 1925, only 1 case of primary pneumonic plague has been documented in the United States. This case occurred at Lake Tahoe, California, in 1980, and resulted from exposure to a kitten with plague pneumonia.

The geographic distribution of cases for 1981 generally reflects the same pattern seen since 1970. New Mexico and Arizona continue to be important foci for human cases. Possible explanations for this distribution are the exposure of American Indian populations to enzootic and epizootic plague foci through hunting and food-gathering activities and the growth of non-Indian populations and expansion of their residential areas into previously uninhabited areas of enzootic plague. Faulty environmental sanitation and premises management may also play a role by providing sites for harboring rodents (*3*).

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1. Wu L-T. A treatise on pneumonic plague. Strasburg: Berger-Levrault, 1926.
2. Kaufmann AF, Boyce JM, Martone WJ. Trends in human plague in the United States. J Infect Dis 1980;141:522-4.
3. Mann JM, Martone WJ, Boyce JM, Kaufmann, AF, Barnes AM, Weber NS. Endemic human plague in New Mexico: risk factors associated with infection. J Infect Dis 1979;140:397-401.

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p 37 In the article "Measles—United States, 1981," 16 areas were reported as having no indigenous measles in 1981. Information recently provided to CDC indicates that South Carolina should now be added to this list. Of the 2 cases reported to CDC from South Carolina for 1981, 1 was acquired outside the United States, and the other was acquired out of state. Thus, there were 17 reporting areas that had no indigenous measles transmission in 1981.

Reported by RL Parker, DVM, State Epidemiologist, South Carolina State Dept of Health and Environmental Control; Immunization Div, Center for Prevention Svcs, CDC.

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CENTERS FOR DISEASE CONTROL

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MMWR

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Current Trends

Smoking and Cancer

The Department of Health and Human Service's (DHHS) 1982 report to Congress on the health consequences of smoking presents a comprehensive evaluation of the relationship between cigarette smoking and cancer. It identifies cigarette smoking as the major single cause of cancer mortality in the United States (*1*).

Since 1937 cancer has been the second most frequent cause of death in the United States and will account for an estimated 430,000 deaths this year. The mortality rate for cancer, unlike the declining rates for other chronic diseases, has changed little over 2 decades, and that change has been a small but measurable increase. This increase in mortality has occurred in the face of remarkable improvements in survival rates associated with some cancer sites through earlier or better diagnosis and treatment. Unfortunately, however, these advances have failed to counter the increases in mortality from smoking-related cancer.

Tobacco's contribution to cancer deaths is currently estimated to be 30%. This means that 129,000 Americans are likely to die of cancer this year because of the higher overall cancer death rates for smokers as compared with nonsmokers. Cigarette smokers have total cancer death rates that are 2 times greater than those for nonsmokers. Heavy smokers (those who smoke more than 1 pack a day) have a 3-4 times greater excess risk of cancer mortality.

Lung Cancer and Smoking

Cigarette smoking is the major cause of lung cancer in the United States. Lung cancer alone accounts for fully 25% of all cancer deaths in this country; it is estimated that 85% of lung-cancer cases are due to cigarette smoking. The number of lung-cancer deaths in the United States increased from 18,313 in 1950 to 90,828 in 1977.

The American Cancer Society estimates that 111,000 persons will die of lung cancer in 1982—80,000 men and 31,000 women. The lung-cancer death rate for women is currently rising faster than that for men, reflecting the more recent adoption of smoking by large numbers of women. When 5-year age-specific lung cancer mortality rates for white females are plotted by calendar year and age, the 3-dimensional graph of lung-cancer mortality (Figure 1) shows a sharp increase in recent years. If these trends continue, the lung-cancer death rate for women will soon surpass that of breast cancer, currently the leading cause of cancer mortality in women. The 5-year survival rate for lung cancer is less than 10%. This rate has not changed appreciably in over 15 years.

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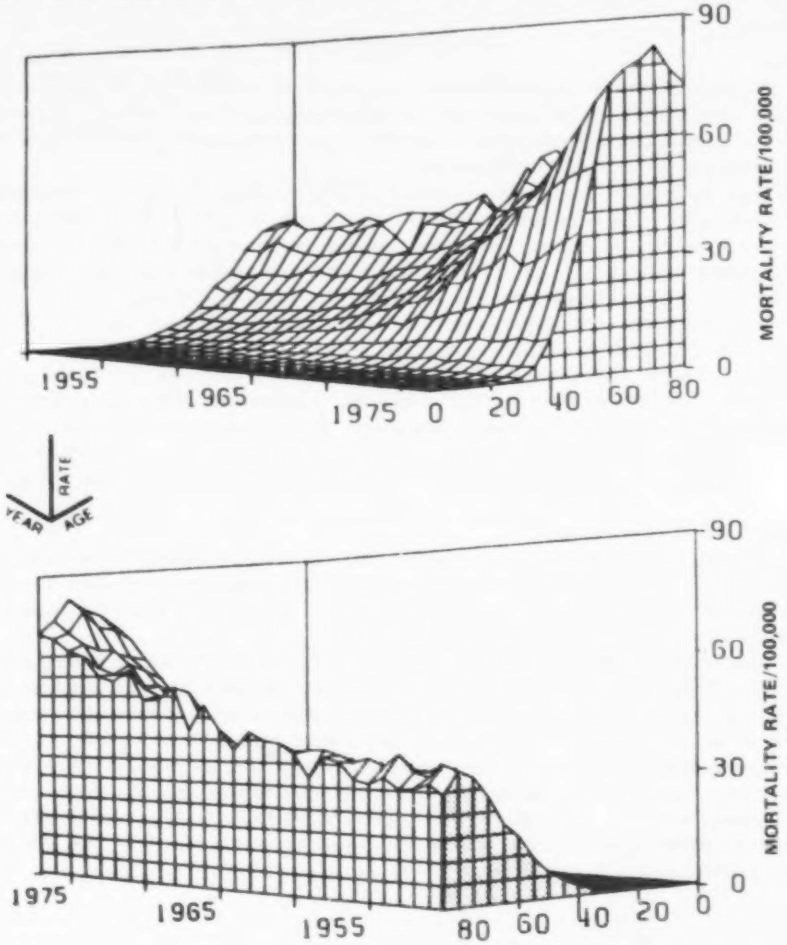
Smoking and Cancer – Continued

Lung Cancer and Involuntary Exposure to Smoking

The DHHS report states that 3 epidemiologic studies examined involuntary or passive smoking and lung cancer in nonsmokers this past year. Two studies found a statistically significant correlation between involuntary smoking and lung-cancer risk in nonsmoking wives of men who smoked. The third noted a positive, but not statistically significant, association. While the nature of this association is unresolved, it does raise the concern that involuntary smoking may pose a carcinogenic risk to the nonsmoker.

FIGURE 1. Age-specific mortality rates by 5-year age groups for cancer of the bronchus, trachea, and lung for white females, United States, 1950-1977



Smoking and Cancer – Continued

Cancer of the Larynx, Oral Cavity, and Esophagus

Cigarette smoking is a major cause of cancer of the larynx, oral cavity, and esophagus. Smokers have a mortality-risk ratio for laryngeal cancer at least 5 times greater than that of nonsmokers. Heavy smokers have laryngeal-cancer mortality ratios 15-30 times those for nonsmokers. In several prospective studies, mortality ratios for these types of cancer could not be calculated because all of the deaths occurred among smokers. An estimated 40,000 individuals will develop laryngeal and oral cancer, which will result in approximately 13,000 deaths this year in the United States. These types of cancers are also strongly associated with use of cigars and pipes in addition to cigarettes. All 3 forms of tobacco carry approximately the same excess relative risk of at least 5-fold. The long-term use of snuff appears to be a factor in the development of oral cancer, particularly of the cheek and gum.

This year 8,300 deaths are expected due to cancer of the esophagus; only about 4% of patients are alive 5 years after diagnosis, and most die within 6 months. Patients with this form of cancer have one of the poorest survival rates for any form of cancer. The use of alcohol in conjunction with smoking acts synergistically to increase the risk of cancer of the larynx, oral cavity, and esophagus.

Cancer of the Bladder, Pancreas, and Kidney

Cigarette smoking is a contributory factor for the development of cancer of the bladder, pancreas, and kidney. The term "contributory factor" by no means excludes the possibility of a direct role of smoking in the causation of these types of cancer. The consistent demonstration of an excess risk of cancer of these sites among smokers in comparison with nonsmokers suggests that if smoking were not to exist in these populations, a measurable proportion of these diseases would not occur. Over 50,000 Americans are expected to develop bladder and kidney cancer this year; about 20,000 will die. The 5-year survival rates are approximately 50%-60%. Numerous investigators have estimated that between 30% and 40% of cases of bladder cancer are smoking related, with slightly higher estimates for males than for females.

Approximately 24,000 people will develop cancer of the pancreas this year, and there will be an estimated 22,000 deaths from pancreatic cancer. Like cancer of the lung and esophagus, pancreatic cancer is often fatal. Patients with this form of cancer have one of the poorest 5-year survival rates for any form of cancer. While few estimates are available as to the proportion of these deaths attributable to smoking, it would appear to be about 30%. Pancreatic cancer appears to be increasing at a more rapid rate than cancer of most other sites except the lung.

Stomach Cancer

Cancer of the stomach has been declining as a cause of death in the United States for many years. The age-adjusted death rate for both males and females declined by 60% from 1950 through 1977. Reasons for this decline are unknown. It is estimated that there will be 24,200 new cases of stomach cancer in the United States in 1982 and 13,800 deaths.

Numerous epidemiologic studies have noted a link between smoking and cancer of the stomach. This association is smaller than that noted between smoking and other cancer sites. The nature of this association cannot be determined at this time because of a lack of supporting clinical and animal-experimentation evidence.

Smoking and Cancer — Continued

Uterine Cervix Cancer

There is conflicting evidence on the role of smoking in the development of cancer of the uterine cervix; further studies are necessary to determine whether an association exists.

Lower-Tar Cigarettes

Smokers of filtered or lower-tar cigarettes have statistically lower death rates from lung cancer than do smokers of nonfiltered or higher-tar brands. This reduced risk was also noted for laryngeal cancer. However, cancer death rates for smokers of lower-tar cigarettes were still significantly higher than those noted for nonsmokers.

Cessation of Smoking

Although cigarette smoking is a cause of many forms of cancer, encouraging facts are presented in this report. Even after many years of cigarette smoking, stopping smoking reduces one's cancer risk substantially compared with that of the continuing smoker. The more years one refrains from smoking cigarettes after stopping, the greater the reduction in excess cancer risk. Fifteen years after stopping cigarette smoking, for example, a former smoker's lung-cancer risk is reduced to nearly the level observed for nonsmokers. This same reduction in cancer risk is observed for other cancer sites associated with smoking. There is no single action an individual can take to reduce the risk of cancer more effectively than to stop smoking—particularly smoking cigarettes.

Reported by the Office on Smoking and Health.

Reference

1. Office on Smoking and Health. The health consequences of smoking: cancer. A report of the Surgeon General. Rockville, Md.: Public Health Service, U.S. Department of Health and Human Services, 1982.

Note: Copies of the full report can be obtained by writing to: Office on Smoking and Health, Park Building, Room 1-58, 5600 Fishers Lane, Rockville, Md. 20857.

Epidemiologic Notes and Reports

Deaths among Patients Using Continuous Subcutaneous Insulin Infusion Pumps — United States

Insulin infusion pumps are open loop devices that administer insulin subcutaneously at a constant low level and deliver added amounts before meals. They represent a new method for attaining improved glucose control in Type I (insulin-dependent) diabetics. Animal studies and limited information regarding humans suggest that improved control of blood sugar may prevent or slow the rate of development of serious complications of diabetes such as retinopathy, nephropathy, neuropathy, and cardiovascular disease. There are approximately 5 million diabetics in the United States, of whom 5%-15% are Type I. Approximately 4,000 pumps are currently in use in the United States, and the number is growing rapidly (*1*).

Three deaths among patients using these devices were reported at the National Diabetes Research Interchange workshop in January 1982 in San Antonio, Texas. CDC subsequently began an active inquiry into the circumstances surrounding these deaths and identified addi-

Insulin Infusion Pumps – Continued

tional deaths that occurred among patients using these devices. A total of 11 cases have been identified.

On February 17, 1982, a panel* of representatives from the National Institutes of Health, the Food and Drug Administration, the National Diabetes Advisory Board, and other diabetes experts met at CDC to discuss these cases (Table 1). Only fragmentary data were available regarding several of the cases; however, all 11 persons died in 1981. Patients ranged in age from 11 years to the early 60's; 6 were male. Duration of diabetes ranged from 3 to 43 years. On the basis of preliminary information, 2 deaths were due to myocardial infarctions, 1 to a cerebrovascular accident, and 1 to mucormycosis. Of 3 patients found dead or comatose in bed, 1 had documented hypoglycemia. One patient drowned, 1 died suddenly in the middle of the night, and 1 died of ketoacidosis. Information was not available for 1 patient. In none of the cases was there any evidence of pump malfunction or failure; patients used pumps from more than 1 manufacturer. When checked, pumps were found to be working properly. In several instances, patients delayed contacting a physician despite finding abnormal blood-sugar levels on home blood-glucose monitors.

The panel came to the following conclusions: 1) Some deaths seem essentially unrelated to insulin therapy. While none of the deaths could be attributed to the infusion pumps, some deaths may have been due to the intensive glycemia control used as a therapeutic goal. Until further information is available, physicians and patients should exercise prudence in selecting goals of therapy, in appropriately monitoring blood-glucose levels, and in regulating insulin dosage. The risks of intensive glycemia control must be weighed against the potential long-term benefits. 2) A better description of the characteristics of the population using these devices is needed, as is information on therapeutic complications for a comparable group of diabetics receiving intensive therapy with multiple manual injections of insulin. Further investigation of the cases reported here is warranted, and surveillance of deaths among patients using insulin infusion pumps should be established.

TABLE 1. Deaths in patients using insulin infusion pumps

Case	Sex	Age	Length of time on pump (mos.)	Information available on circumstances relating to death
1	M	14	9	Sudden
2	M	29	4	Myocardial infarction
3	M	29	1	Drowned
4	F	54	7	Myocardial infarction
5	F	20	1	Hypoglycemia
6	F	21	5	Dead in bed
7	F	11	6	Ketoacidosis
8	M	50's	NA	NA
9	M	40's	NA	Mucormycosis
10	F	60's	NA	Cerebrovascular accident
11	M	60's	NA	Dead in bed

NA = available

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*R Gatling, PhD, M Haffner, MD, Food and Drug Administration; R Mecklenburg, MD, Mason Clinic, Seattle, Washington; N Berlin, J Field, MD, R Kuehne, National Diabetes Advisory Board; E Johnson, PhD, National Institutes of Health; R Guthrie, MD, University of Kansas at Wichita; J Holcombe, MD, University of Oklahoma; J Santiago, MD, Washington University; P Felig, MD, Yale University; and CDC staff.

Insulin Infusion Pumps – Continued

Reported by RL Olson, MD, Lewiston, Idaho; S Leichter, MD, Lexington, Kentucky; J Warram, MD, A Krolewski, MD, Boston, Massachusetts; P Raskin, MD, Dallas, Texas; Diabetes Control, Operation Research, Center for Prevention Svcs, CDC.

Editorial Note: No data on morbidity or mortality are currently available from a group of diabetics under intensive control and not using infusion pumps, i.e., comparable to patients using infusion pumps. Because hypoglycemia is rarely given as the underlying cause of death on death certificates, hypoglycemia death rates are unknown. In Great Britain, some 4% of all deaths among diabetics under age 50 were attributed to hypoglycemia; many of these persons committed suicide (*2*). A prospective study of 285 Type I diabetics seen at the Joslin Clinic and followed for a total of 6,371 patient years showed that 2 deaths had been attributed to hypoglycemia and 3 more were possibly due to hypoglycemia. Information for metropolitan Atlanta suggests an 8-month average duration of pump use. Thus, although 4,000 pumps are currently estimated to be in use in the United States, the number of patient years of insulin pump use may be substantially less than the number of pumps might indicate.

Hypoglycemia is a well-recognized complication of intensive control of diabetes (*3*), but further information is necessary before conclusions can be drawn as to whether hypoglycemia was the cause of death in a greater-than-expected number of patients using insulin infusion devices. CDC is initiating data collection efforts.

(Continued on page 87)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		7th WEEK ENDING			CUMULATIVE, FIRST 7 WEEKS		
		February 20 1982	February 21 1981	MEDIAN 1977-1981	February 20 1982	February 21 1981	MEDIAN 1977-1981
Aseptic meningitis		62	47	48	522	440	347
Brucellosis		3	1	4	10	10	18
Encephalitis:	Primary (arthropod-borne & unspec.)	12	7	7	87	91	85
	Post-infectious	–	1	3	3	11	15
Gonorrhea:	Civilian	14,355	17,692	17,376	124,404	131,097	129,326
	Military	457	481	488	3,832	4,019	3,821
Hepatitis:	Type A	458	603	603	2,723	3,110	3,551
	Type B	319	385	308	2,238	2,239	1,977
	Non A, Non B	33	N	N	181	N	N
	Unspecified	115	180	212	1,106	1,293	1,262
Legionellosis		8	N	N	32	N	N
Leprosy		7	3	3	17	30	22
Malaria		9	16	13	77	156	57
Measles (rubeola)		15	34	265	73	237	1,432
Meningococcal infections:	Total	53	132	67	380	674	403
	Civilian	53	132	66	379	673	398
	Military	–	–	–	1	1	1
Mumps		69	135	374	555	711	2,052
Pertussis		26	25	25	106	116	135
Rubella (German measles)		45	48	278	216	302	1,035
Syphilis (Primary & Secondary):	Civilian	651	598	449	4,433	3,991	3,238
	Military	6	7	4	63	50	42
Tuberculosis		476	452	456	2,989	2,931	3,124
Tularemia		3	2	–	10	13	12
Typhoid fever		5	7	7	54	54	41
Typhus fever, tick-borne (RMSF)		1	2	2	14	8	8
Rabies, animal		70	118	61	520	683	344

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism	10	Paralytic	1
Cholera	1	Psittacosis (N.J. 1)	9
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus	6
Leptospirosis	9	Trichinosis	13
Plague	1	Typhus fever, flea-borne (endemic, murine) (Ala. 1)	1

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 20, 1982 and February 21, 1981 (7th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	62	10	87	3	124,404	131,097	458	319	33	115	8	17
NEW ENGLAND	1	-	1	-	2,849	3,297	6	13	1	6	-	1
Maine	-	-	-	-	146	150	-	-	-	-	-	-
N.H.	-	-	-	-	110	129	-	2	-	-	-	-
Vt.	-	-	-	-	72	52	-	1	1	-	-	-
Mass.	-	-	1	-	1,200	1,281	3	-	-	6	-	-
R.I.	-	-	-	-	186	149	1	1	-	-	-	-
Conn.	1	-	-	-	1,135	1,536	2	9	-	-	-	1
MID. ATLANTIC	7	-	13	-	14,994	14,372	32	39	2	7	-	1
Upstate N.Y.	2	-	6	-	2,219	2,068	10	12	1	4	-	-
N.Y. City	1	-	4	-	6,478	5,625	4	6	-	-	-	-
N.J.	1	-	-	-	2,841	3,158	18	21	1	3	-	-
Pa.	3	-	3	-	3,456	3,521	U	U	U	U	-	1
E.N. CENTRAL	3	-	20	1	15,152	21,021	30	28	3	6	1	-
Ohio	-	-	3	-	5,017	8,552	6	9	1	1	-	-
Ind.	1	-	8	1	2,063	1,692	9	7	1	3	1	-
Ill.	-	-	-	-	2,173	4,493	5	6	1	2	-	-
Mich.	2	-	7	-	4,319	4,583	7	6	-	-	-	-
Wis.	-	-	2	-	1,580	1,701	3	-	-	-	-	-
W.N. CENTRAL	1	1	5	-	5,862	6,519	16	18	3	2	3	-
Minn.	1	-	-	-	912	1,019	9	1	1	-	-	-
Iowa	-	-	2	-	594	586	3	2	1	1	3	-
Mo.	-	1	2	-	2,646	2,979	1	7	1	-	-	-
N. Dak.	-	-	-	-	68	62	-	-	-	-	-	-
S. Dak.	-	-	-	-	182	191	-	1	-	-	-	-
Nebr.	-	-	-	-	334	476	-	5	-	-	-	-
Kans.	-	-	1	-	1,126	1,217	3	2	-	1	-	-
S. ATLANTIC	11	4	12	1	33,176	33,084	43	83	10	23	1	-
Del.	-	-	-	-	503	503	-	-	-	1	-	-
Md.	1	-	5	-	4,286	3,278	1	29	1	6	1	-
D.C.	-	-	-	-	1,573	2,220	-	-	-	-	-	-
Va.	5	2	3	-	2,675	3,100	6	8	4	2	-	-
W. Va.	-	-	-	-	358	426	-	2	-	-	-	-
N.C.	-	-	1	-	5,525	5,483	2	2	-	1	-	-
S.C.	-	1	-	-	2,844	2,921	1	5	-	-	-	-
Ga.	1	-	-	-	5,648	6,909	14	10	1	4	-	-
Fla.	4	1	3	1	9,764	8,244	19	27	4	9	-	-
E.S. CENTRAL	4	1	5	-	10,233	10,763	29	39	7	4	1	-
Ky.	-	-	-	-	1,342	1,347	10	1	-	-	-	-
Tenn.	1	-	4	-	3,966	3,893	13	20	1	-	-	-
Ala.	2	1	1	-	2,988	3,657	2	17	6	4	1	-
Miss.	1	-	-	-	1,937	1,866	4	1	-	-	-	-
W.S. CENTRAL	7	1	7	-	17,800	19,209	131	11	1	36	1	-
Ark.	1	1	-	-	1,565	1,256	1	2	1	1	-	-
La.	5	-	1	-	2,912	2,889	11	1	-	2	-	-
Okla.	-	-	4	-	1,886	1,819	17	3	-	9	1	-
Tex.	1	-	2	-	11,437	13,245	102	5	-	24	-	-
MOUNTAIN	1	-	5	1	4,611	5,215	36	9	2	6	1	-
Mont.	-	-	-	-	214	204	4	-	-	-	-	-
Idaho	-	-	-	-	207	210	2	1	-	1	-	-
Wyo.	-	-	-	-	129	119	3	-	-	-	-	-
Colo.	-	-	1	1	1,293	1,398	7	3	1	-	-	-
N. Mex.	-	-	-	-	591	635	8	2	1	-	-	-
Ariz.	1	-	1	-	1,202	1,653	10	2	-	4	1	-
Utah	-	-	-	-	172	247	2	-	-	-	-	-
Nev.	-	-	3	-	803	750	-	1	-	1	-	-
PACIFIC	27	3	19	-	19,727	17,617	135	79	4	25	-	15
Wash.	-	-	2	-	1,662	1,525	59	18	2	2	-	1
Oreg.	-	-	-	-	1,139	1,444	8	4	2	3	-	-
Calif.	11	3	17	-	16,107	13,780	61	55	-	20	-	11
Alaska	-	-	-	-	486	454	-	-	-	-	-	-
Hawaii	16	-	-	-	333	414	7	2	-	-	-	3
Guam	U	-	-	-	-	29	U	U	U	U	U	-
P.R.	-	-	1	-	247	396	8	2	-	2	-	-
V.I.	-	-	-	-	32	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	36	73	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 20, 1982 and February 21, 1981 (7th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	9	77	15	73	237	53	380	69	555	26	45	216	302
NEW ENGLAND	–	5	1	3	7	3	17	8	50	1	2	10	46
Maine	–	–	–	–	–	–	2	–	13	–	–	–	27
N.H.	–	–	1	1	2	1	5	1	6	–	–	7	17
Vt.	–	–	–	2	1	–	1	–	3	–	–	–	–
Mass.	–	3	–	–	–	–	1	4	19	–	2	3	2
R.I.	–	1	–	–	–	–	1	2	5	1	–	–	–
Conn.	–	1	–	–	4	2	7	1	4	–	–	–	–
MID. ATLANTIC	–	6	–	19	60	10	60	8	39	5	3	11	40
Upstate N.Y.	–	2	–	13	35	3	14	1	16	4	1	7	15
N.Y. City	–	4	–	5	8	1	14	–	6	–	2	4	8
N.J.	–	–	–	–	7	3	17	1	4	1	–	–	15
Pa.	–	–	–	1	10	3	15	6	13	–	–	–	2
E.N. CENTRAL	1	8	–	3	20	3	32	15	231	12	9	28	66
Ohio	–	1	–	–	7	2	12	–	123	8	–	–	–
Ind.	1	1	–	1	–	–	1	2	11	–	2	3	24
Ill.	–	–	–	1	3	1	6	4	21	–	1	9	11
Mich.	–	5	–	1	10	–	13	4	52	–	4	6	9
Wis.	–	1	–	–	–	–	–	5	24	4	2	10	22
W.N. CENTRAL	–	1	–	–	2	3	18	1	26	2	–	9	14
Minn.	–	–	–	–	1	–	4	–	3	–	–	1	2
Iowa	–	–	–	–	–	2	3	1	8	–	–	–	–
Mo.	–	1	–	–	–	1	8	–	3	1	–	6	–
N. Dak.	–	–	–	–	–	–	2	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	1	–	–	–
Nebr.	–	–	–	–	1	–	–	–	–	–	–	–	–
Kans.	–	–	–	–	–	–	1	–	12	–	–	2	12
S. ATLANTIC	3	11	–	8	61	13	87	10	70	1	1	9	27
Del.	–	–	–	–	–	–	–	–	–	–	–	–	–
Md.	–	4	–	–	–	1	4	1	6	–	–	–	–
D.C.	–	1	–	–	1	–	–	–	–	–	–	–	–
Va.	1	2	–	8	3	–	5	2	9	–	–	7	–
W. Va.	–	–	–	–	3	–	2	4	33	–	–	–	9
N.C.	–	–	–	–	–	6	20	1	4	–	–	–	2
S.C.	1	2	–	–	–	1	11	–	2	1	–	–	3
Ga.	1	1	–	–	30	3	26	–	2	–	–	1	5
Fla.	–	1	–	–	24	2	19	2	14	–	1	1	8
E.S. CENTRAL	–	–	1	4	–	6	26	2	8	–	–	5	5
Ky.	–	–	–	1	–	–	1	–	1	–	–	5	4
Tenn.	–	–	1	3	–	2	11	2	4	–	–	–	1
Ala.	–	–	–	–	–	4	14	–	1	–	–	–	–
Miss.	–	–	–	–	–	–	–	–	2	–	–	–	–
W.S. CENTRAL	–	3	3	9	12	5	49	1	23	2	4	17	20
Ark.	–	–	–	–	–	–	4	–	2	–	–	–	–
La.	–	–	–	–	–	–	3	–	–	–	–	–	2
Okla.	–	–	1	1	–	1	5	–	–	–	1	1	–
Tex.	–	3	2	8	12	4	37	1	21	2	3	16	18
MOUNTAIN	–	3	–	–	7	3	24	3	15	2	2	6	9
Mont.	–	–	–	–	–	–	3	–	1	–	–	–	1
Idaho	–	–	–	–	–	–	2	–	2	–	–	–	1
Wyo.	–	–	–	–	–	–	–	–	1	–	–	1	–
Colo.	–	2	–	–	–	–	10	–	1	–	–	–	4
N. Mex.	–	–	–	–	–	–	1	–	–	–	–	–	–
Ariz.	–	1	–	–	–	2	4	–	3	2	1	1	1
Utah	–	–	–	–	–	–	1	2	5	–	1	3	2
Nev.	–	–	–	–	7	1	3	1	2	–	–	1	–
PACIFIC	5	40	10	27	68	7	67	21	93	1	24	121	75
Wash.	–	2	4	9	1	1	7	2	17	–	–	4	15
Oreg.	–	2	–	–	–	–	14	–	–	–	–	–	3
Calif.	5	35	6	17	67	5	42	19	75	1	24	116	57
Alaska	–	–	–	–	–	1	4	–	1	–	–	–	–
Hawaii	–	1	–	1	–	–	–	–	–	–	–	1	–
Guam	U	–	U	–	3	U	–	U	–	U	U	–	–
P.R.	–	1	1	11	36	–	1	1	4	1	–	2	–
V.I.	–	–	–	–	2	–	–	–	–	–	–	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 20, 1982 and February 21, 1981 (7th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	4,433	3,991	476	2,989	10	5	54	1	14	520
NEW ENGLAND	84	98	5	73	–	–	4	–	–	4
Maine	–	1	1	7	–	–	–	–	–	4
N.H.	–	3	1	6	–	–	–	–	–	–
Vt.	–	1	–	3	–	–	2	–	–	–
Mass.	59	56	2	45	–	–	2	–	–	–
R.I.	6	10	–	7	–	–	–	–	–	–
Conn.	19	27	1	5	–	–	–	–	–	–
MID. ATLANTIC	591	635	78	488	–	–	5	–	–	3
Upstate N.Y.	43	48	8	87	–	–	1	–	–	1
N.Y. City	395	398	14	169	–	–	4	–	–	–
N.J.	67	79	32	107	–	–	–	–	–	–
Pa.	86	110	24	125	–	–	–	–	–	2
E.N. CENTRAL	140	234	67	480	–	–	3	–	–	50
Ohio	48	49	20	105	–	–	1	–	–	3
Ind.	24	17	5	68	–	–	–	–	–	5
Ill.	20	119	30	184	–	–	–	–	–	17
Mich.	33	33	7	93	–	–	2	–	–	–
Wis.	15	16	5	30	–	–	–	–	–	25
W.N. CENTRAL	84	64	17	65	5	–	2	–	1	166
Minn.	16	17	–	10	–	–	–	–	–	42
Iowa	1	3	8	11	–	–	1	–	–	58
Mo.	52	36	6	25	4	–	1	–	1	15
N. Dak.	2	–	–	2	–	–	–	–	–	19
S. Dak.	–	–	1	3	–	–	–	–	–	7
Nebr.	2	3	1	2	–	–	–	–	–	15
Kans.	11	5	1	12	1	–	–	–	–	10
S. ATLANTIC	1,222	1,040	109	636	3	1	4	1	9	80
Del.	2	1	–	6	–	–	–	–	–	–
Md.	73	83	18	96	1	1	2	1	6	5
D.C.	76	88	4	21	–	–	–	–	–	–
Va.	89	97	15	43	1	–	1	–	–	38
W. Va.	4	1	1	13	–	–	1	–	3	4
N.C.	98	71	20	117	–	–	–	–	–	–
S.C.	68	76	11	55	1	–	–	–	–	5
Ga.	264	257	12	103	–	–	–	–	–	23
Fla.	548	366	28	182	–	–	–	–	–	5
E.S. CENTRAL	354	320	49	276	–	–	7	–	3	40
Ky.	19	15	10	78	–	–	–	–	–	7
Tenn.	88	124	21	95	–	–	2	–	–	22
Ala.	118	96	16	91	–	–	5	–	3	11
Miss.	12	85	2	12	–	–	–	–	–	–
W.S. CENTRAL	1,230	994	57	255	1	1	3	–	–	85
Ark.	34	11	2	12	1	–	–	–	–	16
La.	221	206	18	61	–	–	–	–	–	2
Okla.	21	21	16	53	–	1	3	–	–	23
Tex.	954	756	21	129	–	–	–	–	–	44
MOUNTAIN	118	88	20	91	1	–	2	–	–	6
Mont.	1	3	5	9	–	–	–	–	–	3
Idaho	9	1	1	3	–	–	–	–	–	–
Wyo.	7	1	1	3	–	–	–	–	–	1
Colo.	32	30	1	12	–	–	–	–	–	–
N. Mex.	22	15	2	14	–	–	–	–	–	1
Ariz.	22	17	3	31	–	–	2	–	–	1
Utah	3	–	5	5	1	–	–	–	–	–
Nev.	22	21	2	14	–	–	–	–	–	–
PACIFIC	610	518	74	625	–	3	24	–	1	86
Wash.	11	18	4	28	–	–	–	–	–	–
Oreg.	25	11	–	19	–	1	1	–	–	–
Calif.	555	474	62	535	–	2	22	–	1	72
Alaska	4	1	–	8	–	–	–	–	–	14
Hawaii	15	14	8	35	–	–	1	–	–	–
Guam	–	–	U	–	–	U	–	U	–	–
P.R.	47	79	4	30	–	–	–	–	–	2
V.I.	–	–	–	1	–	–	–	–	–	–
Pac. Trust Terr.	–	–	U	19	–	U	–	U	–	–

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending February 20, 1982 (7th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	681	469	134	35	19	24	56
Boston, Mass.	209	137	39	14	9	10	27
Bridgeport, Conn.	48	31	11	2	1	3	-
Cambridge, Mass.	16	15	1	-	-	-	2
Fall River, Mass.	23	17	5	-	1	-	1
Hartford, Conn.	67	39	19	6	3	-	4
Lowell, Mass.	26	19	3	3	-	1	-
Lynn, Mass.	18	13	5	-	-	-	-
New Bedford, Mass.	25	16	8	-	-	1	1
New Haven, Conn.	37	25	4	2	-	6	7
Providence, R.I.	64	47	12	2	3	-	3
Somerville, Mass.	6	5	1	-	-	-	-
Springfield, Mass.	42	28	9	2	1	2	6
Waterbury, Conn.	32	26	4	1	1	-	1
Worcester, Mass.	68	51	13	3	-	1	4
MID. ATLANTIC	2,561	1,704	577	153	61	66	94
Albany, N.Y.	58	39	11	4	1	3	1
Allentown, Pa.	23	16	7	-	-	-	2
Buffalo, N.Y.	150	101	33	3	5	8	10
Camden, N.J.	39	20	11	4	-	4	1
Elizabeth, N.J.	34	27	7	-	-	-	3
Erie, Pa.†	35	20	9	4	-	2	-
Jersey City, N.J.	61	45	10	5	1	-	1
N.Y. City, N.Y.	1,437	973	301	101	38	24	56
Newark, N.J.	66	30	19	9	4	4	2
Paterson, N.J.	32	8	12	3	1	8	-
Philadelphia, Pa.†	169	108	47	7	4	3	3
Pittsburgh, Pa.†	50	31	16	2	-	1	2
Reading, Pa.	31	25	5	1	-	-	-
Rochester, N.Y.	139	87	40	5	3	4	7
Schenectady, N.Y.	27	26	1	-	-	-	-
Scranton, Pa.†	21	16	4	-	-	1	-
Syracuse, N.Y.	110	75	25	3	3	4	6
Trenton, N.J.	35	23	9	2	1	-	1
Utica, N.Y.	24	19	5	-	-	-	-
Yonkers, N.Y.	20	15	5	-	-	-	1
E.N. CENTRAL	2,256	1,413	569	139	57	78	70
Akron, Ohio	76	48	18	6	2	2	-
Canton, Ohio	40	29	11	-	-	-	2
Chicago, Ill.	448	270	111	31	16	20	13
Cincinnati, Ohio	126	81	35	5	-	5	10
Cleveland, Ohio	175	108	48	7	9	3	2
Columbus, Ohio	171	96	44	17	8	6	1
Dayton, Ohio	102	62	30	6	1	3	5
Detroit, Mich.	294	159	82	30	9	14	5
Evansville, Ind.	40	31	9	-	-	-	3
Fort Wayne, Ind.	62	36	16	5	1	4	3
Gary, Ind.	21	10	8	3	-	-	-
Grand Rapids, Mich.	50	31	13	3	1	2	3
Indianapolis, Ind.	140	87	43	5	2	3	6
Madison, Wis.	23	15	6	-	1	1	2
Milwaukee, Wis.	145	106	26	3	1	9	2
Peoria, Ill.	43	35	7	1	-	-	2
Rockford, Ill.	34	20	10	4	-	-	1
South Bend, Ind.	50	39	10	1	-	-	2
Toledo, Ohio	143	98	26	9	5	5	6
Youngstown, Ohio	73	52	16	3	1	1	2
W.N. CENTRAL	663	452	133	30	16	32	36
Des Moines, Iowa	47	32	9	1	3	2	1
Duluth, Minn.	48	35	9	3	-	1	6
Kansas City, Kans.	22	15	3	2	-	2	-
Kansas City, Mo.	125	79	25	7	3	11	6
Lincoln, Nebr.	22	19	3	-	-	-	3
Minneapolis, Minn.	76	50	16	2	3	5	5
Omaha, Nebr.	89	61	16	7	4	1	1
St. Louis, Mo.	117	76	32	3	2	4	6
St. Paul, Minn.	75	58	11	3	-	3	5
Wichita, Kans.	42	27	9	2	1	3	3

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					
	ALL AGES	≥65	45-64	25-44	1-24	<1
S. ATLANTIC	1,124	692	268	90	36	36
Atlanta, Ga.	112	69	21	18	4	-
Baltimore, Md.	215	128	54	18	6	9
Charlotte, N.C.	55	36	13	3	1	-
Jacksonville, Fla.	89	55	23	3	7	1
Miami, Fla.	111	74	21	7	2	7
Norfolk, Va.	52	35	9	2	3	3
Richmond, Va.	61	33	19	2	3	5
Savannah, Ga.	44	31	10	2	-	1
St. Petersburg, Fla.	78	65	6	2	2	3
Tampa, Fla.	71	48	16	2	2	3
Washington, D.C.	197	95	65	29	5	3
Wilmington, Del.	39	23	12	2	1	1
E.S. CENTRAL	677	402	181	48	24	22
Birmingham, Ala.	120	72	29	9	3	7
Chattanooga, Tenn.	56	39	13	2	1	1
Knoxville, Tenn.	42	32	8	1	1	-
Louisville, Ky.	95	52	31	6	2	4
Memphis, Tenn.	173	98	49	15	6	5
Mobile, Ala.	44	21	10	8	2	3
Montgomery, Ala.	31	23	5	1	2	-
Nashville, Tenn.	116	65	36	6	7	2
W.S. CENTRAL	1,671	936	445	155	77	56
Austin, Tex.	52	36	10	3	2	1
Baton Rouge, La.	67	35	19	7	1	5
Corpus Christi, Tex.	22	14	5	2	1	-
Dallas, Tex.	193	97	57	18	12	9
El Paso, Tex.	67	37	19	5	2	3
Fort Worth, Tex.	87	56	17	6	1	6
Houston, Tex.	653	337	183	76	37	20
Little Rock, Ark.	49	33	10	6	-	-
New Orleans, La.	141	78	39	14	9	1
San Antonio, Tex.	165	99	42	10	6	8
Shreveport, La.	99	61	29	5	2	2
Tulsa, Okla.	76	53	15	3	4	1
MOUNTAIN	693	429	160	43	31	27
Albuquerque, N. Mex.	63	37	9	10	4	-
Colo. Springs, Colo.	42	24	13	1	3	1
Denver, Colo.	109	67	23	8	7	4
Las Vegas, Nev.	74	38	22	5	4	5
Ogden, Utah	27	21	4	1	-	1
Phoenix, Ariz.	177	107	46	7	8	9
Pueblo, Colo.	24	16	5	2	1	-
Salt Lake City, Utah	49	27	15	3	2	2
Tucson, Ariz.	128	92	23	6	2	5
PACIFIC	1,642	1,147	312	90	38	52
Berkeley, Calif.	17	12	4	1	-	-
Fresno, Calif.	52	35	5	1	5	6
Glendale, Calif.	28	25	-	3	-	-
Honolulu, Hawaii	71	51	15	4	1	-
Long Beach, Calif.	75	52	16	3	1	3
Los Angeles, Calif.	427	284	89	31	17	6
Oakland, Calif.	70	49	15	2	-	4
Pasadena, Calif.	51	39	8	-	1	3
Portland, Oreg.§	130	111	2	5	3	7
Sacramento, Calif.	76	47	19	3	1	6
San Diego, Calif.	97	67	25	2	1	2
San Francisco, Calif.	169	109	36	14	5	4
San Jose, Calif.	198	138	40	13	2	5
Seattle, Wash.	100	66	23	7	-	4
Spokane, Wash.	39	32	6	-	1	-
Tacoma, Wash.	42	30	9	1	-	2
TOTAL	11,968††	7,644	2,779	783	359	393

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Insulin Infusion Pumps—Continued

References

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Wound Botulism Associated with Parenteral Cocaine Abuse — New York City

CDC recently received its first report of botulism directly associated with drug abuse. The patient was admitted to a New York hospital with symptoms of botulism several days after attempting to inject cocaine intravenously. *Clostridium botulinum* the causative organism, usually associated with the consumption of contaminated food, was isolated from specimens obtained from the patient after he was admitted to the hospital.

A 30-year-old male drug abuser in New York City was hospitalized January 2, 1982, 3 days after the onset of progressive neurologic symptoms that included dysphonia, dysarthria, dysphagia and dry mouth, dyspnea, and bilateral arm weakness. Physical examination revealed a small subcutaneous, non-erythematous, non-tender, cyst-like structure on the left arm at the site of an attempt, 2 weeks earlier, to inject cocaine intravenously. Also noted were bilateral ptosis, bilateral abducens paralysis, facial diplegia, dysarthric speech, inability to protrude the tongue, and bilateral arm weakness that was more pronounced in the proximal than the distal musculature. Sensation was normal to all modalities, and deep tendon reflexes were preserved.

Administration of intravenous edrophonium chloride (Tensilon) relieved ptosis and improved extraocular movements and grip strength. Lumbar puncture revealed 5 white blood cells (WBCs)/μL, a protein level of 17mg/dL, and a cerebrospinal fluid glucose level of 51 mg/dL. Median nerve conduction velocity and F-responses were normal, but the amplitude of the evoked muscle-action potential was low. Repetitive stimulation at 10 Hertzogs increased the muscle action potential by 50%. On the basis of these results, a preliminary diagnosis of botulism was made.

Muscle strength and vital capacity deteriorated progressively, and the patient required respiratory support. Cultures of stool and gastric aspirate obtained on admission did not reveal *C. botulinum*; stool and serum were negative for *C. botulinum* toxin in a mouse bioassay. An aspirate of the subcutaneous cyst yielded anaerobic, gram-positive, gas-forming bacilli; isolates were positive for type B botulinum toxin in a mouse bioassay.

Questioning the patient and his family failed to implicate any food source, and no cocaine was available from the sample used by the patient 2 weeks earlier. He had not injected the drug in the company of others, and he reported that none of his friends were similarly ill.

The abscess was excised on the 8th hospital day, and the patient was treated with intravenous penicillin (9 million units per day) for 10 days. *Botulinum* antitoxin was not administered. Because myasthenia gravis, toxic neuropathy, and the descending variant of Guillain-Barré syndrome were considered as diagnoses, the patient was given daily plasma exchanges. Limb and extraocular palsy and vital capacity began to improve, and respiratory support was re-

Wound Botulism – Continued

moved on the 17th hospital day. The patient's dysphagia remains the most severe symptom; however, he continues to improve daily.

Reported by S Rapoport, MD, PB Watkins, MD, S Saul, MD, James Salzer, MD, R Cooper, MD, R Roberts, MD, L Drusin, MD, New York Hospital, S Shahidi, PhD, R Clark, Bureau of Laboratories; V Paul, S Friedman, MD, New York City Dept of Health, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; H Janiger, US Food and Drug Administration; Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Since 1943, when the first report of wound botulism was received, 27 cases have been reported to CDC; 22 involved males. The mean age was 22.7 years (range 6-44). Fifteen cases were associated with type A, 5 with type B, 1 with mixed A and B, and the remainder were undetermined as to type. Twenty cases occurred in states west of the Mississippi, with 10 in California alone. This report from New York City represents the first case involving a drug abuser and suggests that botulism should be considered in the differential diagnosis when a patient with a history of drug abuse is seen for neurologic and respiratory symptoms. The relatively minor wound, the negative stool culture, and negative assays of stool and serum for toxin observed for this patient emphasize the difficulties associated with recognizing cases of wound botulism.

There is no evidence that plasma exchanges are useful in treating persons with any form of botulism. In addition, because of the small number of recognized cases, it has not been possible to evaluate the efficacy of antibiotics or antitoxin as therapy for wound botulism. In 1 review of 9 wound-botulism cases, antitoxin was administered to 4 patients; 3 of these patients survived (*1*).

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Bacteremia among Aortic-Valve Surgery Patients — Boston

In the period March 19-April 6, 1981, 3 of 5 patients at a Boston hospital who had undergone thoracotomy for aortic-valve replacement, developed bacteremia; the causative agent was a strain of *Enterobacter cloacae* not previously isolated at this hospital.

Clinical onset of infection ranged from 4 days to 2 weeks after surgery; 2 patients had mediastinitis in addition to bacteremia. The infected patients ranged in age from 60 to 83 years. Two of the 3 had also had coronary-artery-bypass grafts (CABG), but 22 other patients who had CABG surgery without valve replacement within the same 19-day period after surgery did not subsequently become infected by *E. cloacae.*

Because 3 of 5 patients who had valve replacements had been infected by the same uncommon bacterial strain, and because 2 different types of valves had been used in surgery, an investigation was initiated to identify procedures or equipment used in this surgery that were not used in other types of open-heart surgery. The only piece of equipment used exclusively for aortic-valve surgery was an anaeroid manometer that measured the pressure of cardioplegia solution being injected into the coronary arteries. The manometer, approximately 1 foot of disposable tubing, and a stopcock were connected to sterile tubing extending from the bubble trap (reservoir) of the cardioplegia solution. The manometer was not sterilized or disinfected after each use, and the stopcocks and tubing were not changed on a regular basis. Al-

Bacteremia – Continued

though reflux of the cardioplegia solution into the manometer tubing had not been observed, it was believed this could have occurred as a result of changes in pressure and fluid levels during surgery.

Use of this system was stopped immediately. The inner surfaces of the manomoeter and tubing junction were cultured. The cultures were positive for *E. cloacae* of the same biotype that caused infection in the index patients. In addition, 3 subsequent aortic-valve replacements without use of the implicated manometer were observed, and multiple cultures were obtained during surgery; all cultures were negative for *E. cloacae*.

The infusion pressure of cardioplegia solution is now monitored only with a pressure transducer that is sterilized with ethylene oxide after each use and is connected to the bubble trap by sterile tubing and stopcocks.

Reported by R Kalaidjian, RN, IB Tager, MD, Boston, Massachusetts; Hospital Infections Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Mediastinitis and bacteremia are not uncommon complications of cardiac surgery. In one large study, 3.4% of cardiac surgical procedures performed through a median sternotomy were complicated by mediastinitis; however, there were no clusters of infection caused by a single microbial strain (*1*). Clusters of postoperative mediastinitis and bacteremia caused by a single strain of bacteria do sometimes occur, although the source of infection for the clusters is not often identified. Over the past years, cases of bacteremia have occurred as a result of intravascular infusion of solutions contaminated by pressure transducers (*2*); these instruments have rarely been associated with sternal osteomyelitis and mediastinitis (*3*).

Unsterile anaeroid and mercury manometers are used frequently in a variety of medical and surgical settings to calibrate electronic-pressure-monitoring equipment, such as that used in cardiac catheterization studies. Only rarely has contamination of sterile lines or solution by calibration or monitoring procedures been clearly associated with infection (2). The outbreak investigation reported here clearly demonstrates that a risk exists and reemphasizes the need to keep sterile systems closed and to ensure that the internal surfaces of all equipment directly connected to a sterile system remain sterile.

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Measles, United States — Weeks 1-4, 1982

In the 4-week period January 3-30, 1982 (reporting weeks 1-4), 36 cases of measles were reported to CDC—an average of 9 cases per week. This total is 71.4% below the 126 cases reported in the same period in 1981. It is also a record low for any 4-week period in any reporting year. Only 0.6% (18) of the nation's 3,144 counties reported any measles to CDC in this period (Figure 2).

Of the 36 measles cases reported, 4 were imported, each from a different country: Australia, Canada, England, and Jamaica. The imported cases were reported to have occurred in

Measles — Continued

Hawaii, New York City (2), and Vermont. Three of the importations involved U.S. citizens, and 1 involved a foreign citizen.

An additional 9 of the 36 reported measles cases occurred following transmission from imported cases. This included all cases in 6 of the 10 states reporting measles cases during this period: Hawaii, Kentucky, New Hampshire, Tennessee, Vermont, and Virginia. In 4 of these states, the cases were part of a multi-state outbreak of measles resulting from an earlier importation from El Salvador (*1-2*).

Reported by Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: The 36 measles cases reported in the first 4 weeks of 1982 represent a 99.9% reduction from the 31,411 cases reported in the same period in 1962, the year preceding measles-vaccine licensure. Moreover, the total is a record low for any 4-week period since 1925, when communicable disease reporting on a regular weekly basis was instituted in all states. Importations played a major part in measles activity during this 4-week period, since more than one-third (13/36, 36.1%) of the cases were either importations or resulted from importations. During this period, 99.4% of the nation's counties reported no measles, suggesting that measles transmission has been interrupted in these areas.

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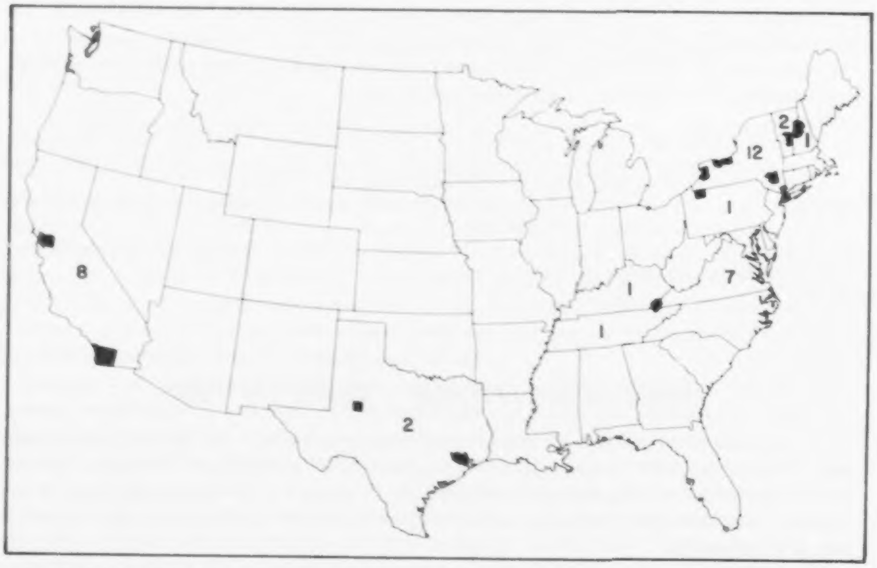
FIGURE 2. States and counties reporting measles,* weeks 1-4, January 3-30, 1982



*Data include 1 case from Hawaii; total for New York represents 4 cases in New York City and 8 from Upstate New York.

Erratum, Vol. 31, Nos. 1 & 2

p 16. In the article "Measles, United States – Weeks 49-52, 1981," reference 1 should read: "CDC. Measles, United States—Weeks 45-48, 1981. MMWR 1981;30:621-2.

Erratum, Vol. 31, No. 5

p 53. In the article "National Surveillance for Reye Syndrome, 1981: Update, Reye Syndrome and Salicylate Usage," reference 1 should read: CDC. Follow-up on Reye syndrome—United States. MMWR 1980;29:321-2.

Erratum, Vol. 31, No. 6

p 73 In the article "Influenza Update—United States," the first name in the credits was misspelled. It should read: P Hom, MD, Sacramento County Health Dept.

The Morbidity and Mortality Weekly Report, circulation 100,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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International Notes

Follow-Up on Epidemic Pneumonia with Progression to Neuromuscular Illness — Spain

In May and June 1981, an extensive outbreak of severe respiratory illness occurred in Spain, primarily in Madrid and the northwest regions of the country (*1,2*). Patients initially had the clinical and radiographic findings of atypical pneumonia, but other common findings were fever, rash, myalgia, and marked eosinophilia. About 1% of patients died. Autopsies showed interstitial pneumonitis and widespread vasculitis (*3*). Convalescence was prolonged in many cases and was characterized by diffuse myalgia, non-pitting edema of the limbs, liver-enzyme abnormalities, and sustained eosinophilia (*4*).

Beginning in August, it was recognized that substantial numbers of previously ill patients were developing neuromuscular problems. Clinical manifestations included muscle atrophy, weight loss, weakness, symmetrical sensory loss, and hyporeflexia. Many patients developed keratoconjunctivitis sicca (decreased tearing and salivation) and scleroderma-like changes of the skin. By that time, chest X rays had become normal. Eosinophilia continued, but at somewhat diminished levels. Moderate elevations of liver enzymes persisted (*5*). Electromyograms showed terminal axonal death, with denervation atrophy on muscle biopsy. Some patients had severe muscle weakness that led to failure of respiratory muscles. Most deaths among patients with neuromuscular illness have largely resulted from complications associated with prolonged maintenance on mechanical ventilation. It is estimated that the epidemic to date has affected about 17,000 persons (about 70% in Madrid). As of December 24, 1981, 13,222 patients had been hospitalized (Figure 1), and 246 had died. Morbidity and case-fatality ratios have been somewhat higher for females than for males, especially among persons between the ages of 10 and 50 years (*6*).

Thus far, extensive microbiologic testing has failed to implicate any infectious agent known to cause atypical pneumonia, eosinophilia, or neuromuscular disease. However, epidemiologic studies have uniformly shown a strong association between illness and ingestion of an illegally marketed cooking oil. This product contained rapeseed oil, denatured by the addition of 2% aniline and imported into Spain for industrial use. After the oil was processed in Spain to remove the aniline, it was sold from house to house and in itinerant markets, primarily in Madrid and nearby provinces. As marketed, the product appears to have been a variable mixture of rapeseed oil, other seed oils, and liquefied pork fat (*2*). Small quantities of aniline and fatty acid anilides have been detected in oil samples.

The discovery of an association between illness and consumption of this oil resulted in vigorous efforts by the Spanish government in late June 1981 to remove all implicated oil from the market. At about the time this action was taken, the epidemic occurrence of acute

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Epidemic Pneumonia – Continued

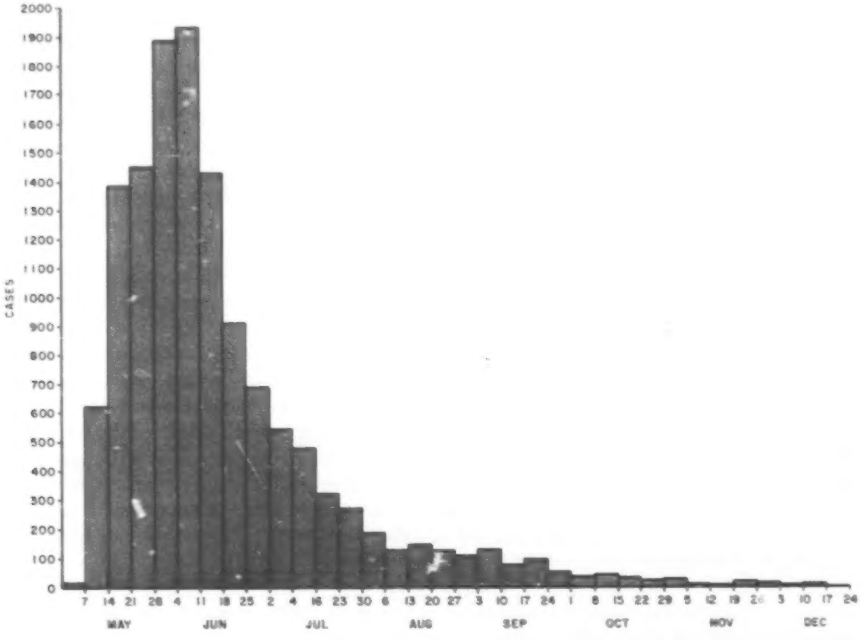
pneumonia fell dramatically (Figure 1). The last reported new case of epidemic illness occurred in September. However, patients with neuromuscular disease, representing about 20% of all cases in the epidemic, constitute a major continuing health problem in Spain.

Reported by Ministerio de Sanidad y Consumo, Madrid, Spain; Field Services Div, Epidemiology Program Office, Chronic Diseases Div, Center for Environmental Health, CDC.

Editorial Note: The unusual collection of clinical features associated with this syndrome (interstitial pneumonitis followed by neuromuscular degeneration and associated with marked eosinophilia and various immunologic abnormalities) clearly represents a new disease. The negative results of extensive testing for known infectious pathogens and the history of chemical denaturation of the implicated oil have suggested that the causative agent may be a chemical toxin.

The search for toxins, however, has been difficult and not yet productive. Because legal action is pending against the distributors of the illicit oil, there is little information regarding the method of processing the oil and the manner in which it might have been contaminated. No known toxic agents have yet been found in any case-associated oils tested thus far, at least not at levels high enough to produce illness. Animal toxicity testing has in general yielded negative results. The clinical picture is not that of toxicity caused by aniline, the chemical denaturant. Much investigative attention has been directed at fatty-acid anilides found in relatively high concentrations in some case-associated oils. The significance of these compounds is uncertain, however, since they are generally considered non-toxic (3, 7). Although new

FIGURE 1. Patients with initial admission to hospital for epidemic pneumonia and/or neuromuscular illness, by week, Spain, May-December, 1981



Epidemic Pneumonia – Continued

cases of the neuromuscular syndrome continued to occur through September, the acute pneumonic phase of the epidemic ended in June. This suggests that exposure to whatever produced the disease may have ceased in early or mid-June, although its delayed sequelae are still being seen in Spanish hospitals.

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Epidemiologic Notes and Reports

Asthma-Like Illness among Crab-Processing Workers — Alaska

At the request of the Alaska Department of Labor, the National Institute for Occupational Safety and Health (NIOSH) is investigating the incidence of newly developed asthma-like symptoms (marked dyspnea and wheezing) among crab-processing workers in the Dutch Harbor area on the Aleutian island of Unalaska.

Data were collected between March 13 and May 13, 1981, when 46 crab-processing workers with marked dyspnea and wheezing visited the Iliuliuk Family Health Service Clinic, the sole provider of medical care in Dutch Harbor. Of the 46, 10 were from neighboring islands or offshore processing ships; 3 had a history of having had similar symptoms before.

The other 33 workers (mean age 23 years, range 18-30), who were employed in 4 seafood-processing plants in the immediate Dutch Harbor area, gave no history of previously experiencing such symptoms. The combined employment of these 4 plants was approximately 825 crab-processing workers, giving an approximate rate for development of dyspnea with wheeze ("crab asthma") of 2 cases/100 workers/month for the crab-processing season. This is at least 80 times the monthly incidence of new cases of asthma and 8 times the incidence of new cases of bronchitis with wheeze reported for groups of Americans of similar age (*1*).

Many workers reported that symptoms began with an upper respiratory infection that resolved except for a residual, nocturnal cough that became progressively stronger until it severely disturbed sleep. The cough worsened on evenings after the processors had worked near high concentrations of steam from crab-cooking pots and improved when the workers had been away from the crab-processing area for 1 or more days. After experiencing the severe cough at night for 1-4 weeks, the affected individuals became markedly short of breath and sought medical attention.

Asthma-Like Illness – Continued

Several conditions may predispose crab-processing workers to have respiratory infections: the Aleutian weather; the generally cold, damp working conditions; the long working hours (up to 10-16 hours/day for 7 days each week); and the close living quarters (2-5 persons/room). Some workers may also have been suffering from acute asthmatic bronchitis. However, it is unlikely that the high incidence of dyspnea with wheeze was due solely to a high rate of respiratory infection, since few persons other than crab processors were seen at the clinic with asthma-like symptoms, and few were seen during the salmon season when crab was not being processed. Furthermore, the reported worsening of symptoms following exposure to concentrations of steam from the crab-cooking vats suggests that symptoms were secondary to an asthma-like reaction to crab constituents. The common premonitory symptom of severe cough at night is especially interesting since cough may be the sole presenting symptom of asthma.

Reported by the Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: Several studies, conducted with small groups of workers who reported respiratory symptoms when processing Alaskan crab (*2*), have shown that some workers have positive scratch skin tests, and/or positive radioallergosorbent tests (RAST), and/or positive serum precipitin tests to crab constituents. Several workers have also experienced significant decreases in pulmonary function after bronchial challenge to nebulized juice from crab-cooking vats.

Similar asthma-like reactions among oyster shuckers in Japan were thought to be secondary to an allergic reaction to sea squirts on the clams (*3*), and in Britain, asthma-like reactions among prawn processors were thought to be secondary to an allergic reaction to prawn constituents (*4*). The British workers began having symptoms about 6 weeks after they stopped hand-peeling the prawns and began using air jets to blow meat from the tail. The air jets probably increased the number of airborne prawn particles in the processing area. A British health survey conducted 8 months after the air jets were introduced showed that 18 of 50 workers complained of asthma-like symptoms; 20 other workers with similar respiratory symptoms had reportedly left the factory since the air jets were introduced. Positive RAST to prawn constituents demonstrated the presence of prawn-specific IGE antibodies for 50% of the symptomatic British workers. After the concentration of airborne meat fragments was reduced by a factor of 10 by substituting water jets for air jets, only 3 workers continued to have symptoms.

The crab-processing industry employs approximately 4,000-5,000 people in the Alaska area during the king crab season (September-December), and half that number during the Tanner and Opilio crab season (March-June). Although further investigation is needed to confirm the cause of the respiratory symptoms occurring among crab-processing workers, modifications to the current processing methods, work practices, and environmental controls may be as successful in reducing the incidence of respiratory symptoms among crab-processing workers as were the modifications made in the British prawn-processing plant.

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Vaccine-Associated Poliomyelitis — United States, 1981

A 27-year-old resident of King County, Washington, was recently reported to have vaccine-associated poliomyelitis. On June 3, 1981, the man developed mild rhinorrhea, and over the next 2 days he experienced pain in his left leg, a sensation of pressure in his lower back, and fever and headache. He also complained of difficulty in urinating. He was hospitalized on June 6. On examination, nasal phonation was noted, and the gag reflex was diminished. There was marked weakness of muscle groups in the left leg, including foot drop, and the deep-tendon reflexes were absent in that leg. Cerebrospinal fluid contained 9 red blood cells/μL and 335 white blood cells/μL, with 5% polymorphonucleocytes, 80% lymphocytes, and 15% monocytes. The glucose level was 81 mg/dL, and the protein, 38 mg/dL.

Poliomyelitis was immediately considered by attending physicians, and poliovirus type II was cultured from a stool specimen obtained the day of admission. This isolate was determined to be vaccine-like by the oligonucleotide-mapping technique at CDC. Serologic studies of acute- and convalescent-phase serum specimens showed a neutralizing antibody titer of 160 to poliovirus type II in both specimens. Neither specimen contained detectable antibodies to poliovirus types I or III. No further neurologic deficits developed, and the patient was discharged after 1 week. Sixty days later, he still had a left-foot drop and marked weakness of muscles in his left leg, necessitating crutches and a foot brace.

The patient had no chronic health problems, no history of travel to any area with endemic poliomyelitis, and no exposure to known cases. Because of his family's religious convictions, he had not been vaccinated for poliomyelitis. Eleven days before onset of symptoms, he had spent a day with relatives, including an 8-week-old infant who had received her first oral poliovirus vaccine 8 days before the visit. Active surveillance did not detect any other cases.

Reported by CM Nolan, MD, Seattle-King County Health Dept, RM Laughery, MD, HB Miller, MD, P Tretheway, PA, Renton, DM Perry, MD, Seattle, HL Cahn, MD, Benton-Franklin Health District, Richland, J Mills, J Allard, PhD, State Epidemiologist, Washington State Dept of Health and Social Svcs; Immunization Div, Center for Prevention Svcs, Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: This case satisfies the definition of endemic, vaccine-associated, household-contact paralytic poliomyelitis according to epidemiologic criteria used by CDC (*1*). The characteristics of the infecting virus as vaccine-like in the laboratory confirms the epidemiologic classification.

Although inactivated polio vaccine (IPV) and oral polio vaccine (OPV) are both effective in preventing poliomyelitis, the Immunization Practices Advisory Committee (ACIP) of the Public Health Service (*2*) and other advisory groups (*3,4*) have considered the benefits and risks of each vaccine to the entire population and have recommended OPV as the vaccine of choice for primary vaccination of children in the United States.

Vaccine-associated poliomyelitis is a predictable complication of the widespread use of OPV. In the period 1969-1980, 291.4 million doses of OPV were distributed in the United States, and 93 cases of vaccine-associated poliomyelitis were reported. Of the 93 cases, 36 occurred among vaccine recipients (1 case/8.1 million doses of vaccine distributed) and 57 among household or community contacts of vaccinees (1 case/5.1 million doses distributed). Most vaccinees (92%) who acquired poliomyelitis were $\leq$4 years of age, whereas most persons (73%) who acquired poliomyelitis after contact with vaccinees were $\geq$20 years of age. Vaccine-related poliomyelitis is most frequently associated with poliovirus types II or III.

Ideally, poliomyelitis among contacts of vaccinees could be prevented if all persons were immune to all 3 poliovirus types before having contact with a vaccinee. Most adults in the United States do possess such immunity, even with no record of having been vaccinated

Vaccine-Associated Poliomyelitis – Continued

against poliomyelitis; however, some do not possess such immunity and are therefore at risk of acquiring vaccine-associated poliomyelitis. Because of the overriding importance of ensuring prompt and complete immunity of children and because of the rarity of OPV-associated disease, the ACIP recommends that responsible adults be informed of the small risk of vaccine-associated poliomyelitis and that OPV be administered to a child regardless of the vaccination status of immunocompetent adult household contacts (*2*). Alternatively, unvaccinated adult contacts can be vaccinated with IPV first, if strong assurance is obtained that immediately following the vaccination of the adult contacts, the child will begin and complete an OPV series.

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TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		8th WEEK ENDING			CUMULATIVE, FIRST 8 WEEKS		
		February 27 1982	February 28 1981	MEDIAN 1977-1981	February 27 1982	February 28 1981	MEDIAN 1977-1981
Aseptic meningitis		78	66	42	601	506	388
Brucellosis		1	1	3	11	11	22
Encephalitis:	Primary (arthropod-borne & unspec.)	16	16	13	104	107	94
	Post-infectious	–	1	4	4	12	20
Gonorrhea:	Civilian	17,862	17,043	16,901	142,466	148,339	145,699
	Military	282	554	480	4,114	4,573	4,281
Hepatitis:	Type A	588	530	530	3,309	3,641	4,034
	Type B	381	403	272	2,621	2,641	2,249
	Non A, Non B	38	N	N	219	N	N
	Unspecified	210	264	195	1,316	1,558	1,458
Legionellosis		3	N	N	35	N	N
Leprosy		1	4	1	18	34	23
Malaria		21	27	12	98	183	69
Measles (rubeola)		10	82	305	82	319	1,737
Meningococcal infections:	Total	80	130	73	460	804	463
	Civilian	79	130	72	457	803	458
	Military	1	–	–	3	1	1
Mumps		177	99	373	730	810	2,425
Pertussis		33	39	37	139	155	172
Rubella(German measles)		264	49	165	482	351	1,284
Syphilis (Primary & Secondary):	Civilian	655	669	457	5,088	4,662	3,671
	Military	8	12	9	71	64	51
Tuberculosis		537	502	494	3,525	3,433	3,618
Tularemia		2	1	1	12	14	13
Typhoid fever		2	8	8	56	62	52
Typhus fever, tick-borne (RMSF)		1	1	–	15	9	9
Rabies, animal		107	113	74	636	796	418

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Calif. 2)	12	Paralytic	1
Cholera	1	Psittacosis (Idaho 1)	10
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus	6
Leptospirosis (Hawaii 1)	10	Trichinosis (R.I. 32, Upstate N.Y. 1, N.J. 6)	52
Plague (Tex. 1)	2	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	2

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 27, 1982 and February 28, 1981 (8th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	76	11	104	4	142,466	148,339	588	381	38	210	3	18
NEW ENGLAND	2	-	1	1	3,239	3,858	9	14	4	13	1	1
Maine	-	-	-	-	173	181	1	3	1	-	1	-
N.H.	-	-	-	-	122	142	-	1	-	1	-	-
Vt.	-	-	-	-	79	55	-	1	-	-	-	-
Mass.	-	-	1	-	1,439	1,561	3	5	2	12	-	-
R.I.	1	-	-	-	231	168	3	3	-	-	-	-
Conn.	1	-	-	1	1,195	1,751	2	1	1	-	-	1
MID. ATLANTIC	8	-	16	-	17,018	16,432	68	71	3	13	-	1
Upstate N.Y.	2	-	7	-	2,703	2,398	17	19	1	2	-	-
N.Y. City	-	-	4	-	7,278	6,375	13	15	-	1	-	-
N.J.	2	-	2	-	3,034	3,690	38	37	2	10	-	-
Pa.	4	-	3	-	4,003	3,969	U	U	U	U	-	1
E.N. CENTRAL	5	-	22	1	18,080	23,526	57	21	2	14	-	-
Ohio	-	-	3	-	6,048	8,956	14	4	-	4	-	-
Ind.	4	-	9	1	2,703	1,870	27	12	1	8	-	-
Ill.	-	-	-	-	2,554	5,401	5	1	1	-	-	-
Mich.	1	-	8	-	4,917	5,198	9	2	-	2	-	-
Wis.	-	-	2	-	1,858	2,101	2	2	-	-	-	-
W.N. CENTRAL	2	1	6	-	6,806	7,273	16	5	1	3	-	-
Minn.	-	-	-	-	1,003	1,171	11	1	-	-	-	-
Iowa	-	-	2	-	726	703	3	1	1	3	-	-
Mo.	2	1	3	-	3,039	3,257	1	2	-	-	-	-
N. Dak.	-	-	-	-	89	75	-	-	-	-	-	-
S. Dak.	-	-	-	-	197	199	1	-	-	-	-	-
Nebr.	-	-	-	-	402	552	-	-	-	-	-	-
Kans.	-	-	1	-	1,350	1,316	-	1	-	-	-	-
S. ATLANTIC	14	4	15	1	37,231	37,751	72	106	8	22	1	-
Del.	-	-	-	-	577	579	2	-	-	-	-	-
Md.	-	-	7	-	5,063	3,937	12	16	2	3	-	-
D.C.	-	-	-	-	1,798	2,563	-	3	-	-	-	-
Va.	1	2	4	-	3,074	3,527	5	7	1	1	1	-
W. Va.	-	-	-	-	423	498	-	3	-	1	-	-
N.C.	2	-	1	-	6,006	6,304	3	5	-	2	-	-
S.C.	-	1	-	-	3,359	3,279	2	6	2	-	-	-
Ga.	1	-	-	-	6,227	7,604	9	29	3	6	-	-
Fla.	10	1	3	1	10,664	9,462	39	37	-	9	-	-
E.S. CENTRAL	4	1	5	-	11,862	11,939	16	31	2	1	-	-
Ky.	-	-	-	-	1,565	1,500	5	4	-	-	-	-
Tenn.	1	-	4	-	4,517	4,522	9	16	2	1	-	-
Ala.	3	1	1	-	3,605	3,787	1	7	-	-	-	-
Miss.	-	-	-	-	2,175	2,130	1	4	-	-	-	-
W.S. CENTRAL	12	2	10	-	20,503	21,614	164	41	5	94	-	-
Ark.	2	1	-	-	1,648	1,321	5	3	1	1	-	-
La.	2	-	1	-	3,400	3,273	28	9	3	16	-	-
Okla.	1	1	5	-	2,134	2,082	20	6	1	16	-	-
Tex.	7	-	4	-	13,321	14,939	131	23	-	61	-	-
MOUNTAIN	1	-	6	1	5,287	5,933	33	18	3	26	-	-
Mont.	-	-	-	-	248	215	-	-	-	-	-	-
Idaho	-	-	-	-	218	236	1	1	-	-	-	-
Wyo.	-	-	-	-	152	127	-	-	-	-	-	-
Colo.	-	-	1	1	1,472	1,550	5	1	-	2	-	-
N. Mex.	-	-	-	-	695	739	3	3	1	2	-	-
Ariz.	1	-	2	-	1,399	1,467	9	7	1	11	-	-
Utah	-	-	-	-	192	276	5	2	-	4	-	-
Nev.	-	-	3	-	911	453	5	4	1	7	-	-
PACIFIC	30	3	23	-	22,440	20,011	113	74	10	24	1	16
Wash.	4	-	2	-	1,928	2,021	35	7	-	1	1	1
Oreg.	3	-	-	-	1,323	1,644	11	6	2	1	-	-
Calif.	9	3	21	-	18,274	15,313	65	57	8	22	-	12
Alaska	1	-	-	-	572	560	1	3	-	-	-	-
Hawaii	13	-	-	-	343	474	1	1	-	-	-	3
Guam	U	-	-	-	-	11	U	U	U	U	U	-
P.R.	-	-	1	-	473	443	3	1	-	-	-	-
V.I.	-	-	-	-	32	7	-	1	-	-	-	-
Pac. Trust Terr.	U	-	-	-	46	42	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 27, 1982 and February 28, 1981 (8th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	21	98	10	82	319	80	463	177	730	33	264	482	351
NEW ENGLAND	-	5	-	2	7	2	19	3	51	6	-	11	49
Maine	-	-	-	-	-	-	2	1	14	-	-	-	30
N.H.	-	-	-	-	2	-	5	1	6	4	-	9	17
Vt.	-	-	-	2	1	-	1	-	3	-	-	-	-
Mass.	-	3	-	-	-	-	1	-	18	-	-	2	2
R.I.	-	1	-	-	-	1	2	-	5	2	-	-	-
Conn.	-	1	-	-	4	1	8	1	5	-	-	-	-
MID. ATLANTIC	3	9	1	20	111	16	76	9	48	5	4	15	48
Upstate N.Y.	-	2	-	13	85	7	21	1	17	4	4	11	22
N.Y. City	-	4	-	5	9	2	16	2	8	-	-	4	9
N.J.	1	1	-	-	7	4	22	5	9	1	-	-	15
Pa.	2	2	1	2	10	3	17	1	14	-	-	-	2
E.N. CENTRAL	-	8	-	3	22	8	40	112	343	10	2	30	77
Ohio	-	1	-	-	7	1	13	96	219	-	-	-	-
Ind.	-	1	-	1	1	1	2	2	13	1	-	3	28
Ill.	-	-	-	1	3	2	8	2	23	7	-	9	18
Mich.	-	5	-	1	11	4	17	10	62	-	2	8	9
Wis.	-	1	-	-	-	-	-	2	26	2	-	10	22
W.N. CENTRAL	1	2	-	-	2	2	20	3	29	-	1	10	18
Minn.	-	-	-	-	1	1	5	-	3	-	-	1	6
Iowa	-	-	-	-	-	-	3	2	10	-	-	-	-
Mo.	-	1	-	-	-	1	9	-	3	-	-	6	-
N. Dak.	-	-	-	-	-	-	2	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	1	-	-	-	-	-	-	-	-
Kans.	1	1	-	-	-	-	1	1	13	-	1	3	12
S. ATLANTIC	7	18	2	11	84	17	104	4	74	1	1	11	32
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	1	5	-	-	-	2	6	-	6	-	1	1	-
D.C.	-	1	-	-	1	-	-	-	-	-	-	-	-
Va.	4	6	-	8	3	4	9	1	10	-	-	7	-
W. Va.	-	-	-	1	4	1	3	2	35	-	-	1	9
N.C.	-	-	-	-	-	-	20	-	4	-	-	-	2
S.C.	-	2	-	-	-	-	11	-	2	-	-	-	4
Ga.	1	2	-	-	40	5	31	-	2	-	-	1	8
Fla.	1	2	2	2	36	5	24	1	15	1	-	1	9
E.S. CENTRAL	-	-	-	4	-	3	29	3	11	-	1	6	6
Ky.	-	-	-	1	-	1	2	3	4	-	1	6	5
Tenn.	-	-	-	3	-	1	12	-	4	-	-	-	1
Ala.	-	-	-	-	-	-	14	-	1	-	-	-	-
Miss.	-	-	-	-	-	1	1	-	2	-	-	-	-
W.S. CENTRAL	2	5	2	10	15	12	61	18	41	3	5	22	25
Ark.	1	1	-	-	-	-	4	1	3	-	-	-	-
La.	-	-	-	-	-	1	4	-	-	-	-	-	2
Okla.	-	-	-	-	2	1	6	-	-	1	-	1	-
Tex.	1	4	2	10	13	10	47	17	38	2	5	21	23
MOUNTAIN	-	1	-	-	7	4	28	6	21	3	2	8	15
Mont.	-	-	-	-	-	-	3	-	1	-	-	-	1
Idaho	-	-	-	-	-	-	2	-	2	-	-	-	1
Wyo.	-	-	-	-	-	2	2	-	1	-	2	3	1
Colo.	-	2	-	-	-	2	12	2	3	3	-	-	9
N. Mex.	-	-	-	-	-	-	1	-	-	-	-	-	-
Ariz.	-	1	-	-	-	-	4	4	7	-	-	1	1
Utah	-	-	-	-	-	-	1	-	5	-	-	3	2
Nev.	-	-	-	-	7	-	3	-	2	-	-	1	-
PACIFIC	8	48	5	32	71	16	81	19	112	5	248	369	81
Wash.	-	2	5	14	1	3	4	-	17	1	2	6	16
Oreg.	-	2	-	-	-	1	16	-	-	-	1	1	3
Calif.	8	43	-	17	70	11	53	17	92	4	245	361	62
Alaska	-	-	-	-	-	-	4	2	3	-	-	-	-
Hawaii	-	1	-	1	-	1	1	-	-	-	-	1	-
Guam	U	-	U	-	4	U	-	U	-	U	U	-	-
P.R.	-	1	2	14	16	-	1	-	4	-	-	2	-
V.I.	-	-	-	-	2	-	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 27, 1982 and February 28, 1981 (8th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	5,088	4,662	537	3,525	12	2	56	1	15	636
NEW ENGLAND	93	106	18	91	-	1	5	-	-	4
Maine	-	1	1	8	-	-	-	-	-	4
N.H.	-	6	-	6	-	-	-	-	-	-
Vt.	-	2	1	4	-	-	2	-	-	-
Mass.	67	60	11	56	-	1	3	-	-	-
R.I.	7	10	4	11	-	-	-	-	-	-
Conn.	19	27	1	5	-	-	-	-	-	-
MID. ATLANTIC	677	710	74	562	1	-	5	-	-	6
Upstate N.Y.	55	60	11	98	1	-	1	-	-	3
N.Y. City	440	448	24	193	-	-	4	-	-	-
N.J.	74	86	17	124	-	-	-	-	-	1
Pa.	108	116	22	147	-	-	-	-	-	2
E.N. CENTRAL	183	281	88	567	-	-	3	-	-	67
Ohio	48	50	11	116	-	-	1	-	-	4
Ind.	41	19	13	81	-	-	-	-	-	6
Ill.	41	157	37	221	-	-	-	-	-	24
Mich.	38	37	24	116	-	-	2	-	-	-
Wis.	15	18	3	33	-	-	-	-	-	33
W.N. CENTRAL	97	83	17	82	5	-	2	-	1	185
Minn.	18	20	4	14	-	-	-	-	-	46
Iowa	3	4	3	14	-	-	1	-	-	66
Mo.	60	51	6	31	4	-	1	-	1	19
N. Dak.	2	-	-	2	-	-	-	-	-	20
S. Dak.	-	-	-	3	-	-	-	-	-	7
Nebr.	2	3	1	3	-	-	-	-	-	16
Kans.	12	5	3	15	1	-	-	-	-	11
S. ATLANTIC	1,410	1,235	105	741	4	-	4	1	10	107
Del.	2	1	2	8	-	-	-	-	-	-
Md.	86	93	13	106	1	-	2	1	7	5
D.C.	93	102	3	24	-	-	-	-	-	-
Va.	93	122	20	63	1	-	1	-	-	53
W. Va.	5	2	2	15	-	-	1	-	-	5
N.C.	107	90	10	127	-	-	-	-	3	-
S.C.	77	86	10	65	2	-	-	-	-	7
Ga.	301	310	12	115	-	-	-	-	-	30
Fla.	646	409	36	219	-	-	-	-	-	7
E.S. CENTRAL	395	344	53	329	-	-	7	-	3	50
Ky.	20	16	14	92	-	-	-	-	-	10
Tenn.	96	132	21	116	-	-	2	-	-	28
Ala.	132	100	11	102	-	-	5	-	3	12
Miss.	147	96	7	19	-	-	-	-	-	-
W.S. CENTRAL	1,404	1,136	82	337	1	1	4	-	-	102
Ark.	59	19	9	21	1	-	-	-	-	18
La.	235	241	19	80	-	-	-	-	-	2
Okla.	26	23	13	66	-	-	3	-	-	24
Tex.	1,084	853	41	170	-	1	1	-	-	58
MOUNTAIN	153	126	14	105	1	-	2	-	-	7
Mont.	1	3	1	10	-	-	-	-	-	4
Idaho	12	2	1	9	-	-	-	-	-	-
Wyo.	7	1	-	1	-	-	-	-	-	1
Colo.	41	67	1	13	-	-	-	-	-	-
N. Mex.	39	29	3	17	-	-	-	-	-	1
Ariz.	21	33	7	38	-	-	2	-	-	1
Utah	4	1	-	5	1	-	-	-	-	-
Nev.	27	25	1	15	-	-	-	-	-	-
PACIFIC	677	[illegible]	86	711	-	-	24	-	1	108
Wash.	11	[illegible]	5	44	-	-	-	-	-	-
Oreg.	25	12	4	23	-	-	1	-	-	-
Calif.	624	617	74	[illegible]	-	-	22	-	1	86
Alaska	9	1	-	8	-	-	-	-	-	22
Hawaii	14	16	2	17	-	-	1	-	-	-
Guam	-	-	U	-	-	U	-	U	-	-
P.R.	61	112	-	[illegible]	-	-	-	-	-	2
V.I.	-	-	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	15	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending February 27, 1982 (8th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	693	493	134	29	17	17	49
Boston, Mass.	173	115	35	13	1	9	18
Bridgeport, Conn.	52	36	12	-	3	1	2
Cambridge, Mass.	26	18	7	1	-	-	4
Fall River, Mass.	22	15	6	1	-	-	-
Hartford, Conn.	52	33	12	4	1	2	4
Lowell, Mass.	41	29	9	1	2	-	-
Lynn, Mass.	19	16	2	-	-	1	-
New Bedford, Mass.	22	18	3	-	1	-	3
New Haven, Conn.	90	67	14	3	4	2	2
Providence, R.I.	55	43	7	2	3	-	5
Somerville, Mass.	13	11	2	-	-	-	2
Springfield, Mass.	42	29	9	3	-	1	4
Waterbury, Conn.	28	20	7	-	1	-	1
Worcester, Mass.	58	46	9	1	1	1	4
MID. ATLANTIC	2,731	1,785	626	167	69	84	128
Albany, N.Y.	53	39	6	4	1	3	2
Allentown, Pa.	25	16	7	2	-	-	-
Buffalo, N.Y.	150	86	48	10	3	3	13
Camden, N.J.	47	29	12	4	2	-	1
Elizabeth, N.J.	29	24	5	-	-	-	-
Erie, Pa.†	36	27	6	2	-	1	2
Jersey City, N.J.	61	45	10	2	-	4	2
N.Y. City, N.Y.	1,444	961	321	98	44	40	54
Newark, N.J.	54	24	19	5	2	4	7
Paterson, N.J.	26	14	7	2	-	3	2
Philadelphia, Pa.†	318	185	91	18	8	16	19
Pittsburgh, Pa.†	97	64	26	3	1	3	1
Reading, Pa.	35	28	3	2	-	2	3
Rochester, N.Y.	130	98	23	6	1	2	8
Schenectady, N.Y.	31	24	4	2	1	-	1
Scranton, Pa.†	25	18	6	1	-	-	1
Syracuse, N.Y.	84	59	17	2	4	2	2
Trenton, N.J.	30	22	8	-	-	-	-
Utica, N.Y.	19	14	4	1	-	-	3
Yonkers, N.Y.	37	28	3	3	2	1	7
E.N. CENTRAL	2,273	1,466	529	131	67	80	62
Akron, Ohio	77	47	20	7	-	3	-
Canton, Ohio	29	18	9	1	-	1	-
Chicago, Ill.	541	349	110	40	20	22	17
Cincinnati, Ohio	131	83	36	6	2	4	2
Cleveland, Ohio	137	83	34	6	4	10	3
Columbus, Ohio	123	67	34	10	7	5	9
Dayton, Ohio	114	78	26	5	3	2	3
Detroit, Mich.	257	153	73	22	5	4	1
Evansville, Ind.	46	37	6	1	1	1	1
Fort Wayne, Ind.	35	22	11	1	-	1	1
Gary, Ind.	20	6	8	-	4	2	-
Grand Rapids, Mich.	60	41	12	1	3	3	4
Indianapolis, Ind.	177	116	40	7	5	9	2
Madison, Wis.	33	20	9	1	2	1	1
Milwaukee, Wis.	131	89	31	7	2	2	1
Peoria, Ill.	51	35	10	2	2	2	5
Rockford, Ill.	43	31	7	2	1	2	4
South Bend, Ind.	56	45	6	3	1	1	3
Toledo, Ohio	124	88	27	2	2	5	4
Youngstown, Ohio	88	58	20	7	3	-	1
W.N. CENTRAL	884	571	191	45	35	42	35
Des Moines, Iowa	55	43	9	2	-	1	-
Duluth, Minn.	27	17	8	-	2	-	2
Kansas City, Kans.	49	31	12	1	3	2	2
Kansas City, Mo.	148	85	36	9	8	10	5
Lincoln, Nebr.	33	27	4	-	-	2	3
Minneapolis, Minn.	112	72	22	9	6	3	5
Omaha, Nebr.	101	61	26	7	2	5	1
St. Louis, Mo.	221	132	52	14	11	12	9
St. Paul, Minn.	67	52	9	2	1	3	3
Wichita, Kans.	71	51	13	1	2	4	5

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,388	842	351	98	43	53	40
Atlanta, Ga.	190	103	56	14	5	12	2
Baltimore, Md.	259	159	63	22	9	6	6
Charlotte, N.C.	97	53	21	9	4	2	2
Jacksonville, Fla.	117	72	34	1	6	4	5
Miami, Fla.	78	47	16	8	3	4	-
Norfolk, Va.	60	37	14	5	3	1	3
Richmond, Va.	84	51	28	4	1	-	4
Savannah, Ga.	47	27	12	3	1	4	3
St. Petersburg, Fla.	91	77	13	-	1	-	7
Tampa, Fla.	75	44	14	7	2	8	2
Washington, D.C.	223	118	67	22	6	10	3
Wilmington, Del.	77	57	13	3	2	2	3
E.S. CENTRAL	797	487	185	65	23	37	25
Birmingham, Ala.	120	66	31	8	2	13	2
Chattanooga, Tenn.	66	45	11	7	2	1	2
Knoxville, Tenn.	53	34	11	7	1	-	1
Louisville, Ky.	110	59	30	9	2	10	4
Memphis, Tenn.	212	131	55	16	6	4	8
Mobile, Ala.	57	40	10	2	4	1	1
Montgomery, Ala.	49	36	5	5	2	1	2
Nashville, Tenn.	130	76	32	11	4	7	5
W.S. CENTRAL	1,567	908	381	133	83	61	48
Austin, Tex. §	55	51	1	-	1	1	3
Baton Rouge, La.	48	30	12	3	2	1	2
Corpus Christi, Tex.	58	36	13	6	3	-	2
Dallas, Tex.	193	113	46	14	11	9	5
El Paso, Tex.	70	49	13	3	2	3	4
Fort Worth, Tex.	112	67	26	7	3	9	9
Houston, Tex.	485	226	139	62	35	24	12
Little Rock, Ark.	61	39	13	4	3	2	2
New Orleans, La.	153	87	46	12	5	3	-
San Antonio, Tex.	183	120	37	13	9	4	5
Shreveport, La.	58	30	19	5	2	2	-
Tulsa, Okla.	91	60	17	4	7	3	4
MOUNTAIN	774	457	177	67	48	24	32
Albuquerque, N.Mex.	102	39	20	22	20	1	4
Colo. Springs, Colo.	40	22	9	3	4	2	3
Denver, Colo.	146	96	35	8	2	5	8
Las Vegas, Nev.	97	47	36	5	7	2	3
Ogden, Utah	12	7	5	-	-	-	-
Phoenix, Ariz.	190	134	29	13	6	8	4
Pueblo, Colo.	30	19	7	2	2	-	1
Salt Lake City, Utah	51	23	15	6	3	4	-
Tucson, Ariz.	106	71	21	8	4	2	11
PACIFIC	1,907	1,246	424	107	62	66	105
Berkeley, Calif.	16	12	4	-	-	-	-
Fresno, Calif.	81	53	14	3	6	5	4
Glendale, Calif.	21	13	6	2	-	-	2
Honolulu, Hawaii	61	39	12	6	1	3	7
Long Beach, Calif.	107	69	28	5	1	4	2
Los Angeles, Calif.	548	352	118	41	19	17	13
Oakland, Calif.	101	73	24	2	1	1	3
Pasadena, Calif.	27	20	5	-	-	2	1
Portland, Oreg.	132	99	20	5	5	3	4
Sacramento, Calif.	55	31	15	4	3	2	2
San Diego, Calif.	187	127	35	9	5	11	20
San Francisco, Calif.	147	90	41	8	5	3	8
San Jose, Calif.	166	95	44	12	10	5	16
Seattle, Wash.	150	98	35	6	4	7	9
Spokane, Wash.	58	37	13	3	2	3	10
Tacoma, Wash.	50	38	10	2	-	-	4
TOTAL	13,011††	8,255	2,998	842	447	464	524

---

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

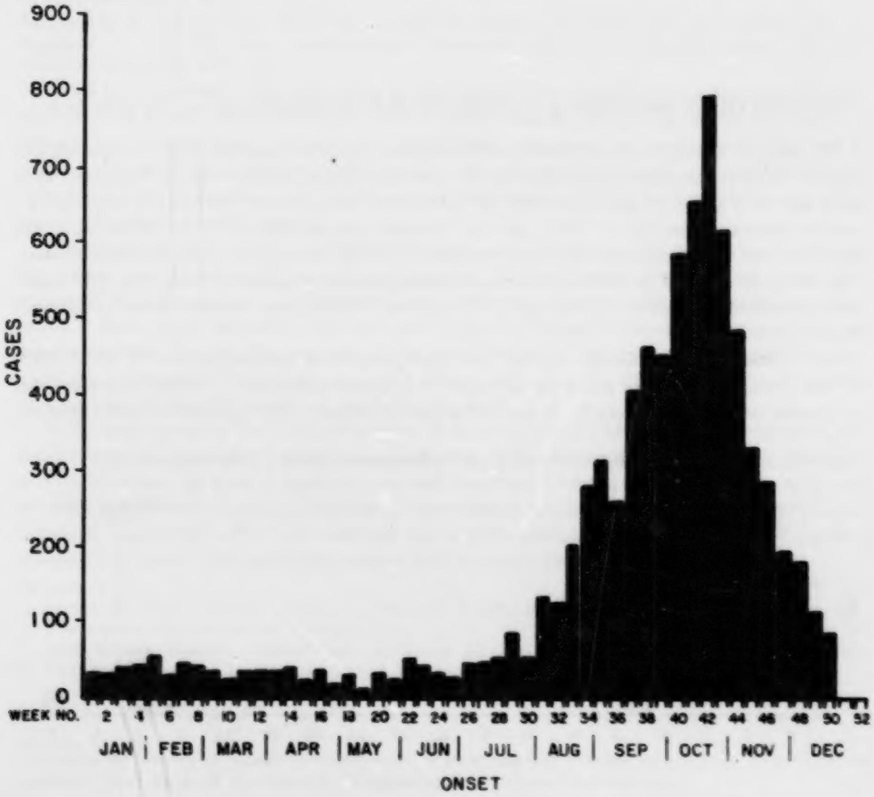
§Data not available. Figures are estimates based on average of past 4 weeks.

Dengue Fever in Puerto Rico — 1981

An outbreak of dengue fever took place in Puerto Rico in the late summer and fall of 1981. In this period, almost 7,000 cases of dengue-like illness were reported to the Puerto Rico Health Department. Numbers of cases of dengue-like illness began increasing in August, reached a peak in mid-October, and declined steadily thereafter (Figure 2). Generally, throughout this period, >50% of the paired serum specimens tested at CDC were positive fc dengue. Cases were reported from all parts of the island, but the areas reporting the highest proportion of cases were districts outside the San Juan metropolitan area. No deaths or illnesses meeting World Health Organization criteria for dengue hemorrhagic fever were documented during the outbreak. However, sporadic hemorrhagic manifestations occurred among patients with confirmed dengue infection for whom the clinical and laboratory data were incomplete.

The Puerto Rico Health Department, in association with other government agencies, organized an extensive island-wide source-reduction and educational campaign in the early

FIGURE 2. Reported Dengue cases, by week of onset, Puerto Rico, 1981



Dengue Fever — Continued

phases of the outbreak. By December 2, CDC had isolated 114 dengue type 1 viruses and 1 dengue type 4 virus. However, by late December, dengue type 4 was the predominant virus being isolated, and by mid-January 1982, more than 40 such isolates had been obtained.

Reported by A Hernandez-Torres, MD, Environmental Health, Puerto Rico Dept of Health; Dengue Br, Vector-Borne Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: The last major outbreak of dengue in Puerto Rico was in 1978 when type 1 was the prevailing virus; apparently, a large susceptible population remained after that outbreak. Outbreaks of dengue occurred in Puerto Rico in 1963-1964 (type 3), 1968-1969 (type 2), 1975 (type 2), and 1977 (types 2 and 3).

Dengue type 4 was reported for the first time in the Caribbean in the spring of 1981 from St. Barthelemy and St. Martin (*1*). Subsequently, dengue type 4 was confirmed in Dominica, Guadaloupe, St. Thomas, Curacao, Belize, Haiti, and Jamaica, as well as Puerto Rico. The possibility exists that an outbreak of dengue type 4 could occur in Puerto Rico in 1982.

Reference

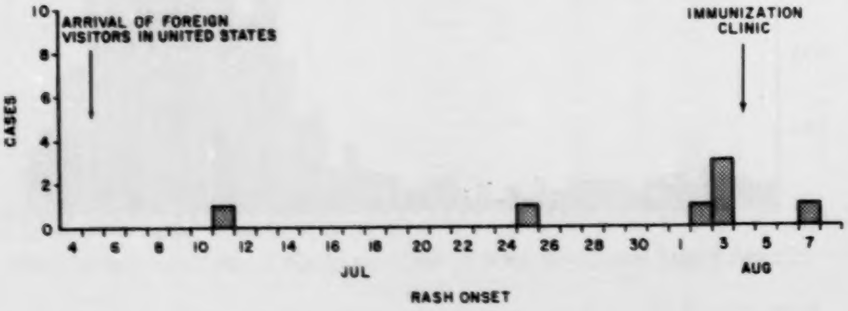
1. CDC. Dengue type 4 infections in U.S. travelers to the Caribbean. MMWR 1981;30:249-50.

Rubella Outbreak among Foreign-Exchange Students — Tennessee

On August 3, 1981, the University of Tennessee at Martin reported that 7 Japanese exchange students had been hospitalized with a preliminary diagnosis of rubella. These students were part of a group of approximately 200 Japanese students and professors who had arrived in Tennessee on July 5, 1981, for the 10-week summer session. They all stayed in the same dormitory and attended classes that were separate from other summer-session meetings, but they mingled with students and the general public outside of class. The 200 Japanese visitors represented 7.4% of the 2,700 summer students then in attendance at this section of the university.

All 7 patients had a maculo-papular rash, low-grade fever (temperature of <102 F, 38.9 C), and either arthralgia or posterior auricular or occipital adenopathy. The initial patient had rash onset on July 11 (Figure 3), 6 days after leaving Japan; was hospitalized with a prelimi-

FIGURE 3. Cases of rubella, University of Tennessee at Martin, July-August 1981



Rubella — Continued

nary diagnosis of Rocky Mountain spotted fever; and was treated with chloramphenicol. The second patient had rash onset on July 25 and was hospitalized with a preliminary diagnosis of measles. Neither case was reported to the health department at the time of illness, and no serum specimens were available for rubella testing. Five tertiary cases occurred the first week of August; all these patients were kept in the university infirmary for at least 1 day each. By the end of the first week in August, all 7 cases were suspected to be rubella and were subsequently reported to the Tennessee Department of Public Health. The diagnosis was confirmed for 4 of the 5 tertiary cases on the basis of a ≥4-fold rise in rubella hemagglutination inhibition titer between the acute- and convalescent-phase serum specimens.

An investigation on campus revealed that 21 Japanese students (10%) had previously received rubella vaccine. In contrast, a review of 200 health records chosen at random from records of the 2,500 American summer students in residence showed that 67% had documentation of having received rubella vaccine. On August 4, 188 Japanese students and faculty were vaccinated with combined measles and rubella (MR) vaccine. The MR vaccine was also offered to other summer students and staff. No other clinical cases of rubella occurred among the Japanese students, and there was no known spread to hospital employees or to other students on campus.

Reported by IF Porter, MD, H Westmoreland, RN, University of Tennessee-Martin; P Duncan, RN, RH Hutcheson, Jr, MD, MPH, State Epidemiologist, Tennessee Dept of Public Health; Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: College-age adults form a large part of the population that remains susceptible to rubella in the United States (*1*). Like measles, rubella will probably be introduced periodically from foreign countries, often by college-age foreign-exchange students. The lack of disease spread in this instance is attributed to the separate dormitory and classes that the Japanese students attended, as well as to the higher rates of rubella vaccination among other summer students on that campus.

Universities should be encouraged to develop programs to ensure rubella vaccination at the time of entry for all students, staff, and faculty, including foreign-exchange and other visiting students and professors. Before vaccination, female students, staff, and faculty should be asked if there is any possibility that they are pregnant. Pregnant women should not be given rubella vaccine, and all other women should be informed of the risks of vaccination and advised not to become pregnant for 3 months after vaccination (*2*). Programs are most likely to be successful if proof of rubella immunity* is required.

In the example cited here, 3 generations of cases occurred before the diagnosis of rubella was considered. Since the incidence of rubella has declined to record low levels (*3*), clinicians and public health workers should be reminded to consider rubella in the differential diagnosis of rash illness and to collect appropriately timed blood specimens for serologic study. Only if rubella is diagnosed early in an outbreak can appropriate measures be instituted to control spread in the community and in institutions such as universities.

References

1. Schiff GM, Linnemann CC, Jr, Shea L, Trimble S. Rubella surveillance and immunization among college women. Obstet Gynecol 1974;43:143-7.
2. ACIP. Rubella prevention. MMWR 1981;30:37-42, 47.
3. CDC. Rubella—United States, 1978-1981. MMWR 1981;30:513-5.

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*Documented history of rubella vaccination on or after the first birthday or presence of antibody to rubella. Clinical diagnosis of rubella should not be accepted as proof of immunity.

Current Trends

Influenza Update — United States

Although no extensive outbreaks of influenza have been reported in the United States this season, states continue to report additional isolations in association with local influenza outbreaks, and other states have now reported their first isolations of influenza virus.

The first isolates of influenza virus (all type B) in Connecticut, Florida, Illinois, South Carolina, and Vermont were associated with sporadic cases in these states in early February. In Georgia, the first isolates of influenza (type B) viruses were collected during the first 2 weeks of February from 2 adult patients in Calhoun and from an 11-year-old boy in the metropolitan Atlanta area. These isolations occurred at the same time increased school absenteeism was noted among students with influenza-like illness in schools in northwest Georgia and the Atlanta area. The first influenza viruses identified in Utah this season were 4 isolates of influenza type B obtained from patients with onset of illness in late January and early February. Three of the isolates were from young-adult residents at a church institution in Utah County, where a small cluster of influenza cases was occurring.

During February, the first influenza type A isolates (all H1N1) reported in New York state and Nevada were from 2 young adults in New York City and 1 in Las Vegas.

Influenza outbreaks reported this season have most frequently been associated with influenza B virus isolates in schools. The following examples from states where influenza isolates have previously been reported include a typical school outbreak, prolonged activity involving influenza type B virus without evidence of major community impact, and an outbreak with both type A and B virus isolations.

An outbreak of influenza in a parochial elementary school located in Cadillac, Michigan, resulted in absenteeism that peaked at 38 of 161 students (24%) on February 9. Influenza type B viruses were isolated from samples taken on February 8 or 9 from 6 of 9 ill students and their family members.

In Houston, Texas, influenza type B virus was first isolated in October 1981, but the frequency of obtaining sporadic isolates through physicians and clinics participating in the active viral surveillance of the Influenza Research Center began to increase in late December (*1,2*). Through February 25, a total of 321 influenza type B and 43 type A(H1N1) isolates had been identified for the 1981-1982 season. Although some increase in school absenteeism has been observed, little evidence of other effects has been reported. Further efforts are being made to determine the effect of infection in the community.

In the period January 21-February 17, 26 specimens for virus isolation were collected from students reporting to the infirmary at the University of Texas in Austin. Influenza type A virus (H1N1) was isolated from 5 specimens, influenza type B from 12, and adenovirus from 1. Since the beginning of classes in late January, student health officials have reported an increase from <5 to >40 in the number of patients seen daily with influenza-like illness.

Reported by D Moore, PhD, G Cooper, MD, State Epidemiologist, Connecticut Dept of Health Svcs; E Buff, MS, R Gunn, MD, State Epidemiologist, Florida Dept Health and Rehabilitative Svcs; R Muldoon, PhD, Cook County Hospital, Chicago, R Harroff, MSc, B Francis, MD, State Epidemiologist, Illinois State Dept of Public Health; H Dowda, PhD, R Parker, DVM, State Epidemiologist, South Carolina Dept of Health; R Vogt, MD, State Epidemiologist, Vermont Dept Health; C Collier, MD, Calhoun, Georgia, T Munroe, R K Sikes, DVM, State Epidemiologist, Georgia Dept Human Resources; B Haslam, F Urry, PhD, R Johns, Jr, MD, State Epidemiologist, Utah State Dept Health; M Catalano, MD, I Spigland, MD, Montefiore Hospital, S Friedman, MD, D Sencer, MD, New York City Health Dept; P Reichelderfer, PhD, Sunrise Hospital, Las Vegas, J Carr, MD, State Epidemiologist, Nevada Dept of Human Resources; D Brown, T Cardinal, MD,

Influenza — Continued

District 1, G Anderson, MD, B Hall, MD, N Hayner, MD, State Epidemiologist, Michigan Dept of Public Health; P Glezen, MD, Influenza Research Center, Baylor College of Medicine, Houston, P Trickett, MD, University of Texas Health Center, Austin, C Sweet, PhD, J Taylor, C Webb, Jr, MD, State Epidemiologist, Texas Dept of Health; Field Svcs, Epidemiology Program Office, Influenza Br, Viral Diseases Div, Center for Infectious Diseases, CDC.

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2. CDC. Influenza Update—United States. MMWR 1982;31:73.

International Notes

Influenza — Worldwide

In Asia, influenza type B viruses were associated with increased morbidity in some regions of the Union of Soviet Socialist Republics (USSR) in November and December 1981 and caused widespread illness in schoolchildren in Japan in February 1982 (*1*). Elsewhere, influenza type B activity has been mainly sporadic, with cases reported in Canada, Israel, and Sweden in addition to those reported earlier in France and Switzerland (*2*). However, in the United Kingdom, where outbreaks of influenza type B first occurred in December among schoolchildren in northwest Scotland, virus activity increased considerably in January and February. Infections have been diagnosed throughout the United Kingdom, and outbreaks have been confirmed among such groups as children in boarding schools, patients in geriatric wards, and personnel at a military base.

Influenza type A(H1N1) viruses, reported infrequently, have been isolated from sporadic cases or during small outbreaks in November and December in Bulgaria, Canada, Egypt, Italy, and the USSR, in addition to Japan (*1*). Influenza type A(H3N2) viruses have been isolated only occasionally in Europe this winter, including those from sporadic cases in Scotland beginning in December, in addition to those reported earlier in Italy and Japan (*1,2*). In Trinidad and Tobago, however, an island-wide outbreak that affected persons of all ages occurred in the period October-December.

Reported by V Zhdanov, MD, Director, Regional Centre for Influenza, Moscow, USSR; PJS Hamilton, MD, Caribbean Epidemiology Centre, Port-of-Spain, Trinidad; Pan American Health Organization, Washington, DC; Virus Diseases Unit, World Health Organization, Geneva, Switzerland; WHO Collaborating Center for Influenza, Viral Diseases Div, Center for Infectious Diseases, CDC.

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1. CDC. Influenza—Japan. MMWR 1982;31:64.
2. CDC. Influenza—United States, Worldwide. MMWR 1981;30:634.

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The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Notice to Readers

Introduction to Table V Premature Deaths, Monthly Mortality, and Monthly Physician Contacts — United States

Beginning with this issue, a new table will appear monthly in the MMWR: "Table V. Potential Years of Life Lost, Deaths, and Death Rates, by Cause of Death, and Estimated Number of Physician Contacts, by Principal Diagnosis" (see page 117). By displaying a variety of measures that gauge the importance and relative magnitude of certain public health issues, this table will call attention to those issues where strategies for prevention are needed. Publication of this table reflects CDC's increased responsibility for promoting action to reduce unnecessary morbidity and premature mortality and continues the MMWR's tradition of disseminating public health information to its readership.

Further improvements in health can be achieved through actions taken by individuals as well as by administrators in the public and private sectors to promote a safer and healthier environment (*1*). To this end, the new table provides information regarding areas that provide the greatest potential for health improvement.

Causes of death are listed in Table V in descending order of the potential years of lost life that are attributed to each cause. In 1980, heart disease, cancer, and cerebrovascular disease accounted for 67.9% of all deaths in the United States; motor-vehicle and other accidents, suicide, and homicide accounted for 8.1% (*2*). In terms of age at the time of death, the relative importance of causes of death changes remarkably; motor-vehicle and other accidents, suicide, and homicide accounted for 40.8% of the total years of life lost prematurely (before age 65 years); and heart disease, cancer, and cerebrovascular disease accounted for 37.2%.

"Potential years of life lost before age 65" in the table is estimated for persons between 1 year and 65 years old at the time of death and is derived by multiplying the annual number of deaths in each age category by the difference between 65 years and the age at the mid-point of each category. If deaths of persons older than 65 years were included, greater weight would be given to natural causes of death, and premature and preventable causes of death would no longer be distinguishable. If deaths of persons younger than 1 year were included, causes of death affecting this age group would be weighted heavily and would therefore contribute a disproportionately large share of potential years of life lost. However, "Infant mortality" in the table is a measure of deaths occurring in this age group and "Prenatal care" reflects efforts to prevent death in this group.

Cause-specific mortality rates, published in the *Monthly Vital Statistics Report* by the National Center for Health Statistics, are estimated from a systematic sample of 10% of death

HE 20.7009:

Premature Deaths – Continued

certificates received in state vital statistics offices during a 1-month period using the underlying cause of death recorded on the certificate. Because complete information concerning the underlying cause of death is not available when the sample is taken, estimates for certain causes are biased in the monthly sample but then are corrected when annual estimates are made. The estimated number of deaths each month is obtained by multiplying the corresponding estimated mortality rate, which is computed on an annual basis, by the provisional population estimate for the United States and then dividing by the number of days for that month as a proportion of the total days in the year.

The measure for morbidity is obtained from the National Disease and Therapeutic Index (NDTI), a random sample of data from office-based physicians in 19 major specialties in the continental United States. Each physician in the sample records all his contacts with private patients for 2 consecutive days each quarter. These contacts comprise telephone calls (7% of total in 1981); office visits (68%); and patients visited by the physician in hospitals (22%), nursing homes (1%), and their own homes (1%). As a result, this measure gives greater weight to those diseases that prompt a visit to a private physician or require hospitalization. When the physician cannot make a diagnosis at the time of the visit, the suspected diagnosis or presenting symptom is recorded. Although misclassification might occur, the potential for this bias is reduced by using broad categories in the table.

Publication of Table V is an effort to use measures of morbidity and mortality as reminders of the impact on public health of some of these preventable problems. However, when data are summarized, their complexity and detail are sacrificed; and when information is simplified, although the overall effect may be clarified, subtle issues may be obscured. Therefore, a series of articles exploring different aspects of preventable problems will be published in the MMWR to complement this table . These articles will present more detailed analysis of what is known about health status indicators, risk factors, and other factors affecting public health.

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2. National Center for Health Statistics. *Monthly Vital Statistics Report*, Vol. 29, No. 13, September 17, 1981.

Current Trends

Antigenic Analysis of Recent Influenza Isolates

Influenza type A(H1N1) and type B viruses received at CDC thus far this winter from outbreaks and sporadic cases in the United States have been closely related to the reference strains A/England/333/80(H1N1) and B Singapore/222/79, respectively. Since about July 1981, influenza type A(H3N2) viruses have been received from Australia, Chile, Guam, Indonesia, Japan, People's Republic of China, Taiwan Province of China, and Trinidad and Tobago. As in the preceding year, the isolates have exhibited heterogeneous reaction patterns in hemagglutination-inhibition tests with ferret serum specimens. Varying proportions of the viruses from different locations are more closely related to A/Texas/1/77 or A/Bangkok/1/79. A minority of recent isolates have been found to exhibit some further antigenic drift from ear-

Influenza Isolates – Continued

lier strains and to resemble the virus A/Shanghai/31/80 isolated in December 1980 from a sporadic case of influenza. As shown in Table 1, A/Shanghai/31/80 exhibits an asymmetric antigenic difference from A/Bangkok/1/79, in that antiserum to A/Bangkok/1/79 usually inhibits the variant to a titer 4-fold lower than homologous, whereas antiserum to A/Shanghai/31/80 reacts almost equivalently with itself and with A/Bangkok/1/79. A further characteristic of A/Shanghai/31/80-like viruses is their low inhibition by A/Texas/1/77 and A/Bangkok/2/79 antisera. The above-described variants have been isolated concurrently, and there is no clear evidence of A/Shanghai/31/80-like viruses, for example, achieving predominance and being responsible for major outbreaks or epidemics in Asia or elsewhere. Prevalence of antibody to A/Bangkok/1/79 and A/Shanghai/31/80 appears similar in the general population in the United States and the United Kingdom, where this has been studied by the WHO Collaborating Centers for Influenza.

TABLE 1. Hemagglutination-inhibition reactions of influenza type A(H3N2) viruses

	Type of ferret serum			
Antigen	**A/Texas/1/77**	**A/Bangkok/1/79**	**A Bangkok/2/79**	**A/Shanghai/31/80**
A/Texas/1/77	**2,560**	160	160	160
A/Bangkok/1/79	640	**1,280**	160	1,280
A/Bangkok/2/79	320	80	**2,560**	80
A/Shanghai/31/80	160	320	40	**640**

Epidemiologic Notes and Reports

Chromium Sensitization in an Artist's Workshop

The National Institute for Occupational Safety and Health (NIOSH) recently evaluated a case of chromium sensitization involving an artist who had made and dyed quilts in her home studio. The artist had symptoms of mucous-membrane irritation; burning and itching of her arms, face, and hands; and edema of the face and fingers. These symptoms were associated with exposure to the cyanotype image-transfer process.

The cyanotype process, often referred to as the "blueprint" or "ferroprussiate" process, is a technique for transferring images from a photographic negative to cloth or paper. Ferric ammonium citrate and potassium ferricyanide are combined with water to form a photosensitive mixture that is then painted on fabric. A photographic negative is placed over the fabric, and the area is exposed to direct sunlight for 10-30 minutes until the pattern outline turns blue on the fabric as a result of ultraviolet radiation. The color is fixed by dipping the fabric in a potassium dichromate solution, rinsing it in water, and setting it out to dry.

The artist reported that she had first used the cyanotype process in June 1978. Shortly thereafter, she noticed a tingling sensation of her hands and skin when she handled the chemicals; these symptoms became more marked each time she dyed fabric. She discontinued use of the process in the summer of 1979. The symptoms, however, recurred each time she had contact with fabrics that had been dyed using the cyanotype process or when she had other direct or indirect contact with materials used in the process. Her symptoms abated when she was away from home, provided she did not take any of the treated cloth with her. Symptoms

Chromium Sensitization – Continued

were most severe when the fabric was being stitched by hand into a quilt and when she had extensive contact with dyed fabrics while threading needles and knotting threads.

Air, fabric, and wipe samples of the artist's work areas were collected. Analysis of the air and fabric samples indicated no detectable levels of hexavalent chromium ("chromium VI"). The analytical method used for fabric samples had a detection limit of 10 parts/million for "chromium VI." However, a highly sensitive qualitative spot test indicated contamination caused by "chromium VI" at the workbench, above the washbasin, on implements used in the process, and on treated fabrics.

Reported by the Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: Potassium dichromate, which is used as a fixer in the cyanotype process, contains "chromium VI" in soluble form. "Chromium VI" is an irritant that has been found to cause rhinitis, nosebleed, ulcerated nasal mucosa, and perforated nasal septum (*1*). It is also a potent sensitizer, and allergic dermatitis with varying degrees of eczema has been reported frequently (*2,3*) for persons exposed to "chromium VI."

Exposure to many toxic chemicals is possible in the pursuit of arts and crafts (*4-6*), a popular hobby and means of making a livelihood in the United States. In this instance the artist's exposure problem was exacerbated by her lack of knowledge of toxic reactions. The instructions available to her stated that the process required use of dangerous chemicals tha

(Continued on page 118

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		9th WEEK ENDING			CUMULATIVE, FIRST 9 WEEKS		
		March 6 1982	March 7 1981	MEDIAN 1977-1981	March 6 1982	March 7 1981	MEDIAN 1977-1981
Aseptic meningitis		71	64	37	672	570	425
Brucellosis		1	1	1	12	12	28
Encephalitis:	Primary (arthropod-borne & unspec.)	10	10	11	114	117	107
	Post-infectious	1	1	2	5	13	25
Gonorrhea:	Civilian	17,325	18,756	17,304	159,782	167,135	162,871
	Military	682	564	471	4,506	5,137	4,818
Hepatitis:	Type A	498	547	620	3,850	4,188	4,646
	Type B	400	386	315	3,049	3,027	2,557
	Non A, Non B	40	N	N	259	N	N
	Unspecified	227	172	200	1,562	1,730	1,677
Legionellosis		11	N	N	46	N	N
Leprosy		1	7	4	20	41	28
Malaria		11	30	5	109	213	78
Measles (rubeola)		19	74	452	98	393	2,189
Meningococcal infections:	Total	71	121	83	531	925	546
	Civilian	71	121	81	528	924	539
	Military	–	–	–	3	1	2
Mumps		155	108	473	884	918	2,898
Pertussis		22	22	22	161	177	186
Rubella (German measles)		59	75	298	540	426	1,582
Syphilis (Primary & Secondary):	Civilian	547	614	495	5,647	5,276	4,166
	Military	5	13	10	76	77	56
Tuberculosis		491	516	546	4,019	3,949	4,141
Tularemia		3	2	2	15	16	14
Typhoid fever		6	8	5	62	70	63
Typhus fever, tick-borne (RMSF)		–	2	1	15	11	16
Rabies, animal		83	105	75	740	901	49

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1
Anthrax	–	Poliomyelitis: Total	1
Botulism (Ohio 1, Calif. 1)	14	Paralytic	1
Cholera	1	Psittacosis (Wash. 1)	11
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus (Ohio 1, Mo. 1, La. 1)	9
Leptospirosis	10	Trichinosis	52
Plague	2	Typhus fever, flea-borne (endemic, murine)	2

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 6, 1982 and March 7, 1981 (9th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	71	12	114	5	159,782	167,135	498	400	40	227	11	20
NEW ENGLAND	6	–	2	2	3,673	4,308	16	10	–	17	–	1
Maine	–	–	–	–	188	205	–	3	–	–	–	–
N.H.	1	–	–	–	138	163	2	2	–	1	–	–
Vt.	–	–	–	–	82	63	2	1	–	–	–	–
Mass.	1	–	1	–	1,634	1,720	10	1	–	15	–	–
R.I.	1	–	–	–	266	191	–	2	–	–	–	–
Conn.	3	–	1	2	1,365	1,966	2	1	–	1	–	1
MID. ATLANTIC	8	–	17	–	19,320	19,011	25	48	5	12	1	1
Upstate N.Y.	1	–	7	–	3,106	2,685	6	19	3	6	–	–
N.Y. City	1	–	4	–	8,328	7,175	3	15	–	1	1	–
N.J.	2	–	3	–	3,452	4,483	16	14	2	5	–	–
Pa.	4	–	3	–	4,434	4,668	U	U	U	U	–	1
E.N. CENTRAL	9	–	26	1	19,752	26,329	85	50	–	20	4	–
Ohio	5	–	8	–	6,428	9,386	32	23	–	13	4	–
Ind.	–	–	5	1	2,817	2,201	13	11	–	3	–	–
Ill.	–	–	–	–	2,849	6,716	17	9	–	2	–	–
Mich.	4	–	5	–	5,580	5,746	23	7	–	2	–	–
Wis.	–	–	2	–	2,078	2,280	–	–	–	–	–	–
W.N. CENTRAL	–	1	6	–	7,504	8,004	20	20	2	1	2	–
Minn.	–	–	–	–	1,081	1,286	11	1	2	–	–	–
Iowa	–	–	2	–	825	790	3	1	–	–	–	–
Mo.	–	1	3	–	3,353	3,548	3	12	–	–	2	–
N. Dak.	–	–	–	–	102	100	–	–	–	–	–	–
S. Dak.	–	–	–	–	215	224	–	–	–	–	–	–
Nebr.	–	–	–	–	442	609	2	5	–	1	–	–
Kans.	–	–	1	–	1,486	1,447	1	1	–	–	–	–
S. ATLANTIC	14	5	17	1	42,432	42,315	51	92	15	42	–	–
Del.	–	–	–	–	670	644	1	–	–	1	–	–
Md.	–	–	8	–	5,857	4,380	4	16	6	5	–	–
D.C.	–	–	–	–	1,999	2,858	2	11	–	–	–	–
Va.	2	3	5	–	3,548	3,892	4	8	2	10	–	–
W. Va.	1	–	–	–	472	553	1	4	–	–	–	T
N.C.	–	–	1	–	6,907	6,982	1	10	–	2	–	–
S.C.	1	1	–	–	3,857	3,803	1	9	–	3	–	–
Ga.	1	–	–	–	6,997	8,357	6	11	1	3	–	–
Fla.	9	1	3	1	12,125	10,846	31	23	6	18	–	–
E.S. CENTRAL	2	1	5	–	13,400	13,896	18	12	1	3	3	–
Ky.	–	–	–	–	1,749	1,764	6	1	–	1	–	–
Tenn.	2	–	4	–	5,072	5,124	7	8	1	–	–	–
Ala.	–	1	1	–	4,084	4,597	3	2	–	2	3	–
Miss.	–	–	–	–	2,495	2,411	2	1	–	–	–	–
W.S. CENTRAL	10	2	10	–	22,180	23,698	119	41	1	74	–	–
Ark.	–	1	–	–	1,888	1,537	5	1	–	4	–	–
La.	2	–	1	–	3,736	3,650	14	8	–	9	–	–
Okla.	1	1	5	–	2,413	2,327	28	7	1	4	–	–
Tex.	7	–	4	–	14,143	16,184	72	25	–	57	–	–
MOUNTAIN	1	–	6	1	6,023	6,785	32	21	4	13	1	–
Mont.	–	–	–	–	283	255	–	–	–	–	–	–
Idaho	–	–	–	–	241	256	2	–	–	–	–	–
Wyo.	–	–	–	–	173	143	–	1	–	–	–	–
Colo.	–	–	1	1	1,677	1,763	16	8	1	2	–	–
N. Mex.	–	–	–	–	753	807	4	3	–	–	–	–
Ariz.	1	–	2	–	1,630	2,211	3	7	1	9	–	–
Utah	–	–	–	–	220	319	4	–	1	2	1	–
Nev.	–	–	3	–	1,046	1,031	3	2	1	–	–	–
PACIFIC	21	3	25	–	25,498	22,789	132	106	12	45	–	18
Wash.	5	–	2	–	2,212	2,142	15	13	1	1	–	2
Oreg.	–	–	–	–	1,413	1,962	5	15	–	3	–	–
Calif.	8	3	23	–	20,786	17,539	110	76	11	41	–	13
Alaska	1	–	–	–	644	609	–	1	–	–	–	–
Hawaii	7	–	–	–	443	537	2	1	–	–	–	3
Guam	U	–	–	–	–	33	U	U	U	U	U	–
P.R.	1	–	1	–	528	544	6	1	–	–	–	–
V.I.	–	–	–	–	41	7	–	–	–	–	–	–
Pac. Trust Terr.	U	–	–	–	36	91	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 6, 1982 and March 7, 1981 (9th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	11	109	19	98	393	71	531	155	884	22	55	540	426
NEW ENGLAND	1	6	2	4	14	2	21	8	59	1	1	10	50
Maine	–	–	–	–	–	–	2	4	18	–	–	–	30
N.H.	1	1	–	–	3	1	6	–	6	–	–	9	18
Vt.	–	–	–	2	1	–	1	–	3	–	–	–	–
Mass.	–	3	–	–	6	–	1	3	21	1	1	1	2
R.I.	–	1	–	–	–	–	2	1	6	–	–	–	–
Conn.	–	1	2	2	4	1	9	–	5	–	–	–	–
MID. ATLANTIC	–	9	1	18	145	6	82	8	56	6	3	18	51
Upstate N.Y.	–	2	1	11	110	3	24	–	17	3	1	12	24
N.Y. City	–	4	–	5	11	–	16	1	9	–	2	6	9
N.J.	–	1	–	–	8	–	22	1	10	–	–	–	16
Pa.	–	2	–	2	16	3	20	6	20	3	–	–	2
E.N. CENTRAL	–	8	2	5	31	18	58	95	437	8	10	40	85
Ohio	–	1	–	–	11	9	22	45	263	–	–	–	–
Ind.	–	1	–	1	2	2	4	4	17	1	2	5	30
Ill.	–	–	1	2	4	5	13	1	24	5	1	10	20
Mich.	–	5	1	2	14	2	19	9	71	1	4	12	10
Wis.	–	1	–	–	–	–	–	36	62	1	3	13	25
W.N. CENTRAL	2	4	–	–	3	2	22	–	29	1	3	13	22
Minn.	–	–	–	–	1	–	5	–	3	1	–	1	6
Iowa	1	1	–	–	1	–	3	–	10	–	–	–	–
Mo.	–	1	–	–	–	–	9	–	3	–	2	8	–
N. Dak.	–	–	–	–	–	–	2	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	1	1	–
Nebr.	1	1	–	–	1	1	1	–	–	–	–	–	–
Kans.	–	1	–	–	–	1	2	–	13	–	–	3	16
S. ATLANTIC	3	21	1	12	91	11	115	20	94	2	2	13	40
Del.	–	–	–	–	–	–	–	–	–	–	–	–	–
Md.	–	5	–	–	–	–	6	–	6	–	–	1	–
D.C.	2	3	1	1	1	–	–	–	–	–	–	–	–
Va.	1	7	–	8	3	2	11	3	13	1	1	8	–
W. Va.	–	–	–	1	4	–	3	12	47	1	–	1	10
N.C.	–	–	–	–	–	1	21	–	4	–	–	–	2
S.C.	–	2	–	–	–	1	12	1	3	–	1	1	4
Ga.	–	2	–	–	41	2	33	–	2	–	–	1	11
Fla.	–	2	–	2	42	5	29	4	19	–	–	1	13
E.S. CENTRAL	–	–	–	4	–	8	37	4	15	1	1	7	10
Ky.	–	–	–	1	–	–	2	3	7	–	1	7	6
Tenn.	–	–	–	3	–	7	19	–	4	1	–	–	4
Ala.	–	–	–	–	–	1	15	1	2	–	–	–	–
Miss.	–	–	–	–	–	–	1	–	2	–	–	–	–
W.S. CENTRAL	–	5	2	12	16	11	72	5	46	1	7	29	27
Ark.	–	1	–	–	–	3	7	–	3	–	–	–	–
La.	–	–	–	–	–	1	5	–	–	–	–	–	2
Okla.	–	–	–	–	2	–	6	–	–	–	–	1	–
Tex.	–	4	2	12	14	7	54	5	43	1	7	28	25
MOUNTAIN	–	3	–	–	8	2	30	1	22	–	1	10	19
Mont.	–	–	–	–	–	–	3	–	1	–	–	–	1
Idaho	–	–	–	–	–	–	2	–	2	–	–	–	1
Wyo.	–	–	–	–	–	–	2	–	1	–	–	3	1
Colo.	–	2	–	–	–	2	14	–	3	–	1	1	13
N. Mex.	–	–	–	–	–	–	1	–	–	–	–	1	–
Ariz.	–	1	–	–	1	–	4	1	8	–	–	1	1
Utah	–	–	–	–	–	–	1	–	5	–	–	3	2
Nev.	–	–	–	–	7	–	3	–	2	–	–	1	–
PACIFIC	5	53	11	43	85	11	94	14	126	2	31	400	122
Wash.	–	2	–	14	1	2	11	1	18	–	–	6	20
Oreg.	–	2	–	–	–	2	18	–	–	–	–	1	19
Calif.	5	48	11	28	84	7	60	12	104	2	30	391	83
Alaska	–	–	–	–	–	–	4	–	3	–	1	1	–
Hawaii	–	1	–	1	–	–	1	1	1	–	–	1	–
Guam	U	–	U	–	3	U	–	U	–	U	U	–	–
P.R.	–	1	5	15	41	1	2	5	9	1	–	2	–
V.I.	–	–	–	–	2	–	–	–	–	–	–	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 6, 1982 and March 7, 1981 (9th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	5,647	5,276	491	4,619	15	6	62	-	15	740
NEW ENGLAND	107	125	20	111	-	-	5	-	-	4
Maine	-	1	-	8	-	-	-	-	-	4
N.H.	-	7	-	6	-	-	-	-	-	-
Vt.	-	2	-	4	-	-	2	-	-	-
Mass.	75	72	12	68	-	-	3	-	-	-
R.I.	8	10	5	16	-	-	-	-	-	-
Conn.	24	33	3	9	-	-	-	-	-	-
MID. ATLANTIC	772	782	70	632	1	-	5	-	-	8
Upstate N.Y.	67	60	10	108	1	-	1	-	-	5
N.Y. City	494	497	32	225	-	-	4	-	-	-
N.J.	84	93	11	135	-	-	-	-	-	1
Pa.	129	132	17	164	-	-	-	-	-	2
E.N. CENTRAL	218	358	88	655	-	2	5	-	-	71
Ohio	55	52	6	122	-	1	2	-	-	6
Ind.	44	21	14	95	-	-	-	-	-	6
Ill.	41	193	28	249	-	1	1	-	-	24
Mich.	59	72	34	150	-	-	2	-	-	-
Wis.	15	20	6	39	-	-	-	-	-	35
W.N. CENTRAL	111	98	17	99	5	-	2	-	1	211
Minn.	21	28	5	19	-	-	-	-	-	46
Iowa	3	5	4	18	-	-	1	-	-	73
Mo.	69	55	3	34	4	-	1	-	1	23
N. Dak.	2	1	-	2	-	-	-	-	-	27
S. Dak.	-	-	-	3	-	-	-	-	-	12
Nebr.	3	3	1	4	-	-	-	-	-	16
Kans.	13	6	4	19	1	-	-	-	-	14
S. ATLANTIC	1,572	1,410	108	847	5	3	7	-	10	127
Del.	2	3	1	9	-	-	-	-	-	-
Md.	94	108	11	117	1	-	2	-	7	9
D.C.	100	128	5	29	-	-	-	-	-	-
Va.	102	133	13	76	1	1	2	-	-	63
W. Va.	6	3	3	18	-	-	1	-	-	6
N.C.	123	104	18	144	-	-	-	-	3	-
S.C.	86	58	9	74	3	-	-	-	-	8
Ga.	351	345	22	137	-	-	-	-	-	33
Fla.	708	488	26	243	-	2	2	-	-	8
E.S. CENTRAL	450	379	33	362	-	-	7	-	3	68
Ky.	22	17	7	99	-	-	-	-	-	11
Tenn.	110	149	9	125	-	-	2	-	-	41
Ala.	155	107	13	115	-	-	5	-	3	16
Miss.	163	106	4	23	-	-	-	-	-	-
W.S. CENTRAL	1,490	1,232	36	373	2	-	4	-	-	115
Ark.	43	19	9	30	1	-	-	-	-	19
La.	282	258	-	80	-	-	-	-	-	3
Okla.	29	24	1	67	1	-	3	-	-	28
Tex.	1,136	931	26	196	-	-	1	-	-	65
MOUNTAIN	160	132	4	109	1	1	3	-	-	12
Mont.	1	3	1	11	-	-	-	-	-	8
Idaho	12	2	-	4	-	-	-	-	-	-
Wyo.	7	1	-	3	-	-	-	-	-	1
Colo.	48	40	2	15	-	-	-	-	-	-
N. Mex.	34	28	-	17	-	-	-	-	-	1
Ariz.	28	33	1	39	-	-	2	-	-	2
Utah	4	2	-	5	1	1	1	-	-	-
Nev.	24	23	-	15	-	-	-	-	-	-
PACIFIC	767	760	115	831	1	-	24	-	1	120
Wash.	24	27	-	34	1	-	-	-	-	-
Oreg.	31	14	5	28	-	-	1	-	-	-
Calif.	686	701	105	714	-	-	22	-	1	90
Alaska	5	1	-	13	-	-	-	-	-	30
Hawaii	21	17	5	42	-	-	1	-	-	-
Guam	-	-	U	-	-	U	-	U	-	-
P.R.	90	127	-	30	-	-	-	-	-	4
V.I.	-	-	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 6, 1982 (9th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	644	409	153	45	14	25	40
Boston, Mass.	203	113	51	18	6	15	22
Bridgeport, Conn.	43	36	5	–	1	1	2
Cambridge, Mass.	12	7	5	–	–	–	1
Fall River, Mass.	25	14	6	3	1	1	–
Hartford, Conn.	60	36	17	3	–	4	1
Lowell, Mass.	29	18	7	2	1	1	–
Lynn, Mass.	24	17	6	1	–	–	1
New Bedford, Mass.	14	13	1	–	–	–	–
New Haven, Conn.	39	24	8	5	1	1	2
Providence, R.I.	54	38	14	2	–	–	3
Somerville, Mass.	12	10	2	–	–	–	1
Springfield, Mass.	42	27	8	7	–	–	2
Waterbury, Conn.	30	20	7	3	–	–	3
Worcester, Mass.	59	40	12	1	4	2	2
MID. ATLANTIC	2,703	1,822	584	175	60	78	127
Albany, N.Y.	48	36	9	1	–	2	2
Allentown, Pa.	25	18	6	1	–	–	–
Buffalo, N.Y.	140	107	22	7	1	3	11
Camden, N.J.	33	18	12	2	–	1	–
Elizabeth, N.J.	35	28	6	1	–	–	1
Erie, Pa.†	29	21	3	3	–	2	–
Jersey City, N.J.	58	41	10	5	–	2	1
N.Y. City, N.Y.	1,517	1,017	304	115	38	43	67
Newark, N.J.	67	25	20	5	2	7	7
Paterson, N.J.	30	20	9	1	–	–	–
Philadelphia, Pa.†	263	159	66	15	10	9	14
Pittsburgh, Pa.†	69	46	15	4	2	2	1
Reading, Pa.	31	25	5	–	1	–	2
Rochester, N.Y.	131	99	24	4	3	1	12
Schenectady, N.Y.	25	17	8	–	–	–	–
Scranton, Pa.†	40	31	6	3	–	–	3
Syracuse, N.Y.	64	43	12	1	3	5	2
Trenton, N.J.	41	29	10	2	–	–	2
Utica, N.Y.	21	20	–	1	–	–	2
Yonkers, N.Y.	22	18	3	–	–	1	2
E.N. CENTRAL	2,171	1,343	535	140	63	86	60
Akron, Ohio	69	50	14	2	1	2	–
Canton, Ohio	45	27	14	2	1	1	1
Chicago, Ill.	512	293	131	52	14	22	10
Cincinnati, Ohio	176	126	29	14	5	2	13
Cleveland, Ohio	179	108	44	13	8	6	1
Columbus, Ohio	134	78	36	7	6	7	6
Dayton, Ohio	104	70	21	5	2	6	2
Detroit, Mich.	233	124	68	28	4	9	8
Evansville, Ind.	44	29	14	–	–	1	2
Fort Wayne, Ind.	54	33	16	2	1	2	1
Gary, Ind.	14	6	6	1	–	1	–
Grand Rapids, Mich.	49	35	10	1	1	2	3
Indianapolis, Ind.	165	107	40	4	9	5	3
Madison, Wis.	35	22	6	1	3	3	2
Milwaukee, Wis.	133	92	31	5	1	4	–
Peoria, Ill.	23	14	4	–	1	4	3
Rockford, Ill.	38	28	8	2	–	–	2
South Bend, Ind.	22	17	4	–	1	–	1
Toledo, Ohio	97	56	32	1	3	5	1
Youngstown, Ohio	45	30	11	–	2	2	1
W.N. CENTRAL	795	517	173	54	23	26	31
Des Moines, Iowa	96	61	25	3	5	2	2
Duluth, Minn.	53	37	11	2	2	1	7
Kansas City, Kans.	31	21	5	3	2	–	4
Kansas City, Mo.	126	80	31	6	3	6	3
Lincoln, Nebr.	27	20	4	1	2	–	3
Minneapolis, Minn.	82	50	17	9	2	4	4
Omaha, Nebr.	84	58	11	9	1	5	2
St. Louis, Mo.	157	97	36	12	6	6	2
St. Paul, Minn.	68	46	16	6	–	–	1
Wichita, Kans.	71	47	17	5	–	2	3
S. ATLANTIC	1,353	781	380	55	54	52	33
Atlanta, Ga.	146	76	43	13	8	6	1
Baltimore, Md.	382	229	104	25	13	10	6
Charlotte, N.C.	72	40	10	11	5	6	5
Jacksonville, Fla.	122	69	29	4	12	8	3
Miami, Fla.	101	54	30	9	5	3	1
Norfolk, Va.	43	25	15	1	–	2	1
Richmond, Va.	92	56	27	4	1	4	2
Savannah, Ga.	35	16	12	4	1	2	2
St. Petersburg, Fla.	111	88	18	5	–	–	5
Tampa, Fla.	60	38	9	4	5	4	4
Washington, D.C.	158	77	51	18	6	4	2
Wilmington, Del.	29	13	12	1	–	3	1
E.S. CENTRAL	693	420	177	41	25	30	36
Birmingham, Ala.	115	68	28	8	4	7	1
Chattanooga, Tenn.	59	33	17	5	2	2	5
Knoxville, Tenn.	46	33	12	–	–	1	–
Louisville, Ky.	110	64	25	12	2	7	10
Memphis, Tenn.	144	86	39	5	5	9	9
Mobile, Ala.	51	25	16	2	7	1	2
Montgomery, Ala.	62	42	15	3	2	–	1
Nashville, Tenn.	98	65	21	6	3	3	6
W.S. CENTRAL	1,437	847	356	115	67	52	44
Austin, Tex.	50	38	6	2	2	2	2
Baton Rouge, La.	44	25	14	2	2	1	1
Corpus Christi, Tex.	38	19	5	4	2	2	–
Dallas, Tex.	206	107	51	22	19	7	1
El Paso, Tex.	78	47	19	9	–	3	2
Fort Worth, Tex.	90	64	15	3	4	4	7
Houston, Tex.	431	225	128	38	26	14	6
Little Rock, Ark.	62	47	9	4	–	2	3
New Orleans, La.	109	58	28	7	3	13	2
San Antonio, Tex.	145	92	37	8	6	2	8
Shreveport, La.	85	60	17	5	3	–	4
Tulsa, Okla.	93	65	21	5	–	2	8
MOUNTAIN	750	451	185	47	29	37	41
Albuquerque, N.Mex.	94	39	27	13	14	–	2
Colo. Springs, Colo.	35	24	10	3	1	1	4
Denver, Colo.	142	80	33	10	2	17	4
Las Vegas, Nev.	71	43	21	2	4	1	–
Ogden, Utah	18	14	–	2	–	2	2
Phoenix, Ariz.	193	125	51	7	2	8	11
Pueblo, Colo.	27	20	4	2	1	–	1
Salt Lake City, Utah	61	40	8	4	2	7	3
Tucson, Ariz.	105	66	31	4	3	1	14
PACIFIC	1,756	1,166	353	122	50	64	90
Berkeley, Calif.	20	14	4	–	–	2	–
Fresno, Calif.	85	51	17	8	3	6	2
Glendale, Calif.	34	30	3	–	1	–	4
Honolulu, Hawaii	67	45	11	6	3	2	2
Long Beach, Calif.	110	73	28	3	3	3	3
Los Angeles, Calif.	539	359	121	32	12	15	28
Oakland, Calif.	64	40	13	5	3	3	4
Pasadena, Calif.	27	22	3	–	–	2	2
Portland, Oreg.	106	68	20	9	5	4	4
Sacramento, Calif.	72	44	22	3	–	3	2
San Diego, Calif.	128	74	37	10	5	2	14
San Francisco, Calif.	172	106	36	17	7	5	8
San Jose, Calif.	159	106	34	11	5	3	10
Seattle, Wash.	115	70	24	12	3	6	2
Spokane, Wash.	62	38	17	4	–	3	4
Tacoma, Wash.	36	28	3	2	–	3	1
TOTAL	12,342††	7,856	2,900	844	385	450	502

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

TABLE V. Potential years of life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States, October 1981

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Estimated annual total of potential years lost before age 65, 1980[1]	Estimated monthly mortality[2] Number	Estimated monthly mortality[2] Rate/100,000	Estimated number of monthly physician contacts[3]
ALL CAUSES (TOTAL)	10,006,060	164,950	844.4	96,550,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	8,500	43.5	5,156,000
Malignant neoplasms (140-208)	1,804,120	36,120	184.9	1,990,000
Diseases of heart (390-398 402, 404-429)	1,636,510	61,810	316.4	5,168,000
Suicides, homicides (E950-E978)	1,401,880	4,160	21.3	–
Chronic liver disease and cirrhosis (571)	301,070	2,730	14.0	100,000
Cerebrovascular diseases (430-438)	280,430	13,710	70.2	473,000
Pneumonia and influenza (480-487)	124,830	3,790	19.4	904,000
Diabetes mellitus (250)	117,340	3,130	16.0	2,764,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	4,280	21.9	1,824,000
Prenatal care[4]				2,187,000
Infant mortality[4]		3,700	11.7/1000 live births	

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[1] National Center for Health Statistics. *Monthly Vital Statistics Report*, Vol. 29, No. 13, September 17, 1981. Total potential years of life lost are estimated for persons between 1 year and 65 years old at the time of death and are derived from the product of the number of deaths in each age category and the difference between 65 years and the age at the midpoint of each category.

[2] National Center for Health Statistics. *Monthly Vital Statistics Report*, Vol. 30, No. 11, February 10, 1982, pp 8-9. Infant deaths and provisional U.S. population from Vol. 30, No. 10, January 15, 1982, p 1. Mortality rates on an annual basis per 100,000 estimated population in the United States are estimated from the underlying cause of death recorded on a 10% systematic sample of death certificates taken from all those received in state vital statistics offices during a 1-month period. The number of deaths each month is estimated from the product of the corresponding estimated mortality rate and the provisional U.S. population estimated for that month divided by the number of days that month as a proportion of the total days in the year.

[3] IMS America. *National Disease and Therapeutic Index* (NDTI), Monthly Report, October, 1981, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2100) who record all private patient contacts for 2 consecutive days each quarter.

[4] "Prenatal care" and "Infant mortality" are included in the table because "Potential years of life lost" does not reflect deaths of children <1 year.

Chromium Sensitization – Continued

must be handled with care and kept out of the reach of children. The instructions also suggested that rubber gloves be worn. However, neither the instructions nor the container of potassium dichromate provided any information regarding the strong hypersensitivity reactions that might be induced by potassium dichromate. Proper labeling might have led to earlier intervention and a solution to the problem.

Finally, it is important to note that potassium ferricyanide may form cyanide gas when exposed to heat, acid, or ultraviolet light. Since some artists use carbon arcs when doing the cyanotype process indoors, care must be taken to ensure that confined work areas are properly ventilated so that any lethal hydrogen cyanide gas produced will be completely removed.

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Current Trends

Surveillance of Childhood Lead Poisoning — United States

In the fourth quarter of fiscal year 1981, 59 childhood lead-poisoning prevention programs reported that 143,000 children were screened, and 6,500 were identified with lead toxicity. For the fiscal year, programs screened 535,000 children (the largest number ever tested in a single year), found almost 22,000 with the disease, and referred 23,000 for treatment for iron deficiency.

Childhood lead toxicity is found throughout the United States in both large and small communities. The Second National Health and Nutrition Examination Survey, 1976-1980 (NHANES II)—conducted by the National Center for Health Statistics to measure blood-lead levels in the general U.S. population—showed that 4% of all children, ages 6 months-5 years, had elevated blood-lead levels. Positivity rates ranged from 2.1% in rural areas to 11.6% in inner cities.

Since 1973, childhood lead-poisoning prevention programs have reported screening almost 3,900,000 children and adults, 243,000 (6.2%) with lead toxicity. Because of the pervasiveness of childhood lead toxicity, many state and local child health programs have included lead screening as a routine service for all patients, ages 1-5 years. In fiscal year 1981, 70% of the children reported as being screened were initially tested in these other child health programs.

Childhood Lead Poisoning – Continued

TABLE 2. Results of screening in childhood lead poisoning prevention programs, United States, fourth quarter fiscal year 1981 (July-September)

	Number of children						Number of dwellings related to children with lead toxicity		
		With lead toxicity*							
		Requiring pediatric management							
Programs	Screened	Total	Class II	Classes III & IV	Receiving pediatric management	Identified with iron deficiency	Inspected	Found with lead	Reduced
Bridgeport, Conn.	720	55	31	24	158	54	81	54	40
Waterbury, Conn.	735	30	18	12	107	44	37	32	21
Boston, Mass.	4,847	180	129	51	885	157	76	72	39
Lawrence, Mass.	1,976	123	75	48	224	32	81	53	47
Worcester, Mass.	1,372	25	10	15	95	5	32	32	25
Rhode Island State	2,098	68	32	34	338	81	67	35	23
REGION I TOTAL	**11,748**	**479**	**295**	**184**	**1,587**	**373**	**336**	**278**	**195**
Cumulative FY 81	51,282	1,622	1,042	580		1,545	1,279	1,135	795
Atlantic City, N.J.	267	30	11	19	34	2	27	25	17
Camden, N.J.	1,054	38	23	12	247	58	58	28	22
East Orange, N.J.	944	40	28	14	182	113	13	11	13
Elizabeth, N.J.	284	17	11	8	109	NA	14	10	4
Jersey City, N.J.	1,294	80	62	18	163	25	82	54	53
Long Branch, N.J.	225	8	7	1	27	7	10	8	8
Newark, N.J.	2,426	306	238	70	741	215	83	81	42
Paterson, N.J.	838	141	97	44	747	104	55	54	57
Plainfield, N.J.	910	28	14	12	128	46	25	24	5
Erie Co., N.Y.	1,864	52	33	19	201	21	78	34	49
Monroe Co., N.Y.	1,428	138	100	38	264	56	45	38	58
New York City	30,218**	1,452**	869	583	2,256	2,168	449	323	52
Onondaga Co., N.Y.	2,089	96	68	28	288	83	79	75	94
Westchester Co., N.Y.	1,118	33	26	7	273	54	38	27	22
REGION II TOTAL	**48,077**	**2,452**	**1,583**	**869**	**5,660**	**2,952**	**1,056**	**793**	**496**
Cumulative FY 81	171,726	8,786	6,013	2,773		11,971	3,546	2,797	2,114
Delaware State	1,375	48	34	14	207	28	29	19	21
Washington State	3,481	89	61	28	264	420	88	66	34
Baltimore, Md.	6,670	200	130	70	814	135	111	105	85
Chester, Pa.	543	11	6	5	105	7	10	10	6
Philadelphia, Pa.	5,172	349	204	145	2,140	16	223	213	118
Wilkes-Barre, Pa.	415	17	10	7	83	28	19	17	8
York, Pa.	175	2	1	1	5	2	2	2	1
Lynchburg, Va.	414	18	10	8	60	24	24	18	12
Newport News, Va.	615	13	8	5	55	87	28	23	5
Norfolk, Va.	1,045	17	12	5	197	17	37	10	8
Portsmouth, Va.	513	19	15	4	102	8	25	15	10
Richmond, Va.	1,753	27	16	11	118	31	42	29	27
REGION III TOTAL	**22,151**	**608**	**307**	**301**	**4,148**	**803**	**638**	**527**	**335**
Cumulative FY 81	84,186	3,722	2,421	1,301		2,524	2,165	1,722	1,167
Augusta, Ga.	554	7	4	3	73	19	2	0	0
Savannah-Chatham Co., Ga.	3,140	121	79	42	129	6	115	113	21
Louisville, Ky.	2,833	39	24	15	285	79	97	83	93
Cabarrus Co., N.C.	417	2	2	0	15	5	3	3	1
South Carolina State	9,764	74	53	21	393	20	76	50	39
REGION IV TOTAL	**16,508**	**243**	**182**	**61**	**895**	**129**	**293**	**249**	**154**
Cumulative FY 81	47,631	614	412	202		980	752	635	490
Chicago, Ill.	11,884	842	460	382	NA	76	674	394	330
Ill. (other local progs.)†	1,117	34	15	19	38	4	21	19	1
Kankakee, Ill.	672	16	14	2	44	100	24	20	3
Madison, Co., Ill.	544	22	16	6	107	5	4	4	0
Rockford, Ill.	744	14	8	6	79	14	11	9	8
Waukegan-Lake Co., Ill.	903	8	5	3	40	14	11	11	0
Ft. Wayne, Ind.	80	3	1	2	40	0	4	3	0
Detroit, Mich.	5,073	314	226	88	434	12	111	174	15
Wayne Co., Mich.	495	37	29	8	78	17	18	17	13
Akron, Ohio	1,350	69	65	4	108	9	50	43	40
Cincinnati, Ohio	2,362	88	62	26	575	730	105	17	11
Cleveland, Ohio	3,830	243	191	52	885	356	74	39	32
Beloit, Wis.	219	4	1	3	18	10	8	8	0
Milwaukee, Wis.	2,352	86	47	39	339	45	161	137	150
REGION V TOTAL	**31,242**	**1,780**	**1,140**	**640**	**2,781**	**1,479**	**1,278**	**805**	**603**
Cumulative FY 81	108,430	5,287	3,255	1,032		5,011	3,993	2,134	2,082
Arkansas State	3,384	84	50	34	198	39	73	56	24
Louisiana State‡	3,558	19	14	5	28	0	7	7	2
New Orleans, La.	3,756	121	82	39	591	119	125	86	66
Houston, Tex.	885	28	15	13	130	51	35	18	9
REGION VI TOTAL	**11,583**	**252**	**161**	**91**	**947**	**209**	**241**	**167**	**101**
Cumulative FY 81	40,944	571	366	205		915	686	466	486
Cedar Rapids-Linn Co., Iowa	867	13	9	4	60	11	8	8	5
Davenport-Scott Co., Iowa‡	539	11	3	8	57	14	20	19	13
St. Louis, Mo.	3,212	453	295	158	2,306	69	777	493	343
Omaha-Douglas Co., Neb.	407	20	15	[illegible]	145	5	28	27	40
REGION VII TOTAL	**5,025**	**497**	**322**	**175**	**2,568**	**99**	**833**	**547**	**401**
Cumulative FY 81	19,487	1,486	935	551		547	2,600	1,727	1,681
REGION IX TOTAL	—	—	—	—	—	—	—	—	—
Cumulative FY 81	4,033	9	2	7		251	149	46	41
U.S. TOTALS	**146,334**	**6,511**	**4,170**	**2,341**	**18,806**	**6,044**	**4,749**	**3,368**	**2,285**
Cumulative FY 81	535,730	21,897	14,446	7,451		23,324	15,472	10,886	6,837

*Screening Class II and Classes III & IV defined in CDC Statement, "Preventing Lead Poisoning in Young Children," April 1978.

**Estimated.

†Not cumulative.

‡Reporting program not receiving lead poisoning prevention grant support.

NA-Not available.

Erratum, Vol. 31, No. 7

p89. In the article "Measles, United States—Weeks 1-4, 1982" on line 4 of p90, the sentence that begins "This included all cases . . ." should read: "Thus, all cases in 6 of the 10 states reporting measles during this period were either imported measles cases or secondary to imported measles cases: Hawaii, Kentucky, New Hampshire, Tennessee, Vermont, and Virginia."

Erratum, Vol. 31, No. 8

p106. In the article "Influenza Update—United States," it was incorrectly stated that "The first influenza viruses identified in Utah this season were 4 isolates of influenza type B obtained . . ." The sentence should read: "The first influenza type B viruses identified in Utah this season were 4 isolates obtained . . ."

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31/10

CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Historical Perspectives

Centennial: Koch's Discovery of the Tubercle Bacillus

On March 24, 1882, Robert Koch announced to the Berlin Physiological Society that he had discovered the cause of tuberculosis. Three weeks later, on April 10, he published an article entitled "The Etiology of Tuberculosis" (*1*). In 1884, in a second paper with the same title, he first expounded "Koch's postulates," which have since become basic to studies of all infectious diseases. He had observed the bacillus in association with all cases of the disease, had grown the organism outside the body of the host, and had reproduced the disease in a susceptible host inoculated with a pure culture of the isolated organism.

Koch continued his studies on tuberculosis, hoping to find a cure. In 1890, he announced the discovery of tuberculin, a substance derived from tubercle bacilli, which he thought was capable of arresting bacterial development *in vitro* and in animals. This news gave rise to tremendous hope throughout the world, which was soon replaced by disillusionment when the product turned out to be an ineffective therapeutic agent. Tuberculin later proved to be a valuable diagnostic tool.

In 1905, when Koch was awarded the Nobel Prize in medicine, he devoted his acceptance speech to promoting greater understanding of tuberculosis and its causative agent. Koch died in 1910, leaving the scientific community and the world in general with a valuable inheritance of knowledge and understanding resulting from his seminal work on anthrax, cholera, trypanosomiasis, and especially tuberculosis.

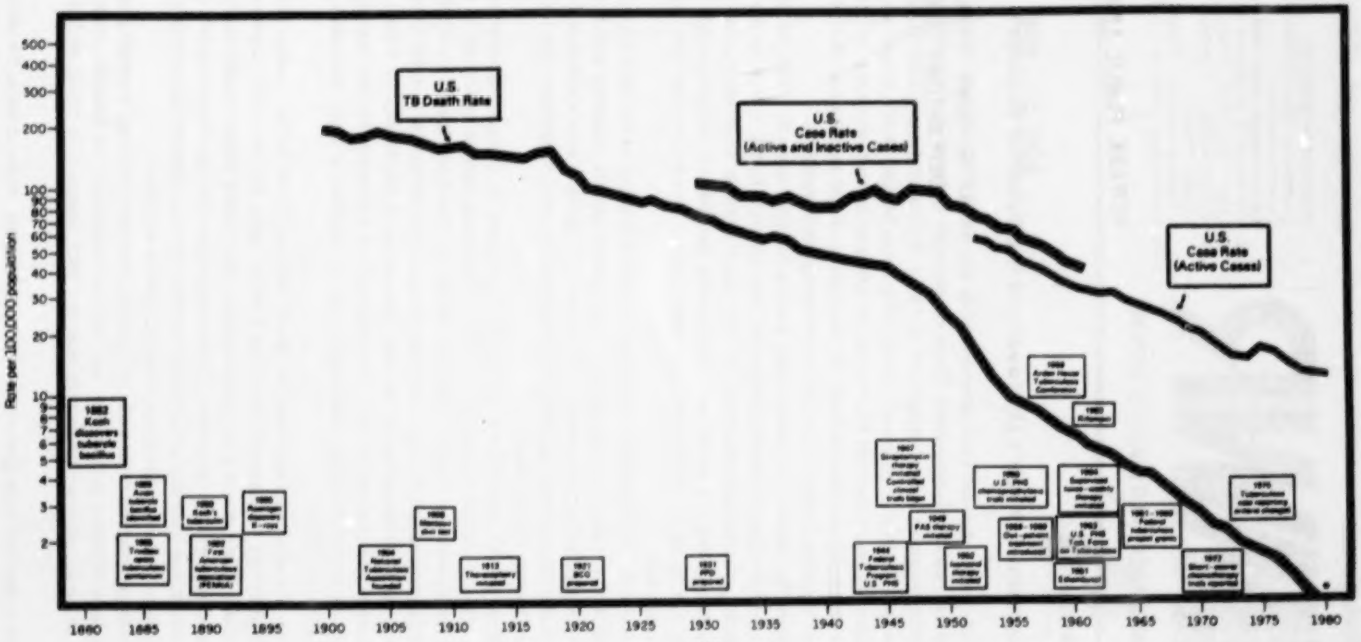
In the wake of Koch's discoveries, subsequent progress in conquering tuberculosis has been relatively slow. In the laboratory, recognition of the avian bacillus by Nocard in 1885 and differentiation of bovine and human tubercle bacilli by Theobald Smith in 1898 laid the groundwork for identification of other (nontuberculous) mycobacterial species. Diagnosis of tuberculosis was aided by discovery of the acid-fast nature of the bacillus by Ehrlich in 1882, discovery of X rays by Roentgen in 1895, development of the tuberculin skin test by Von Pirquet and Mantoux in 1907-1908, and preparation of purified protein derivative (PPD) of tuberculin by Seibert in 1931.

In the 1930s, the epidemiologic work of Wade Hampton Frost led to a better understanding of the epidemiology of tuberculosis. In the 1940s, using Seibert's PPD administered by the Mantoux method and chest X-ray examinations, the United States Public Health Service began a series of studies that elucidated further the epidemiology of tuberculosis and made apparent the distinction between tuberculous infection without disease (a positive skin test in the absence of signs and symptoms) and overt clinical tuberculosis.

Treatment has progressed from bed rest, special diets and fresh air, through pneumothorax and other lung-collapse procedures and surgical resection, to specific chemotherapy (streptomycin in 1947, para-aminosalicylic acid in 1949, isoniazid in 1952, and drugs such

HE 20.7009:

FIGURE 1. A century of advances in tuberculosis control, United States



*Provisional data: 1979 = 0.9; 1980 = 0.8.

Tubercle Bacillus – Continued

as rifampin in recent years). With combinations of modern drugs properly administered, tuberculosis is now virtually 100% curable.

Prevention of tuberculosis has been approached in 2 ways. In 1921, Calmette and Guerin developed an attenuated strain of *Mycobacterium bovis*, which many countries throughout the world have used, with variable results, as a vaccine. The other major approach to prevention has been the treatment of persons with subclinical tuberculous infection (tuberculous infection without disease) with isoniazid.

There have been recent improvements in tuberculosis-control methodology. Effective treatment regimens of 9 months' duration are now available, and research continues in attempts to further shorten treatment. Fluorescence microscopy has made the examination of sputum smears faster, easier, and more accurate. Phage typing is a useful tool for studying the epidemiology of tuberculosis. Newer immunologic techniques offer promise of improved diagnostic tests, and rapid radiometric methods of identifying *M. tuberculosis* and testing for drug susceptibility are being developed.

In the century since Koch's discovery, advances in prevention, diagnosis, and treatment of tuberculosis—especially treatment—have produced a spectacular decline in tuberculosis mortality and a striking decline in tuberculosis morbidity—primarily in technically advanced countries (Figure 1). Progress has been less dramatic in developing countries. Tuberculosis stubbornly persists as a major worldwide health problem. It is estimated that as many as 10 million cases of tuberculosis may occur throughout the world each year—4-5 million of them highly infectious, and 2-3 million resulting in death. Eradication of tuberculosis, although possibly attainable in technical terms, remains an elusive goal.

Reported by Tuberculosis Control Div, Center for Prevention Svcs, Mycobacteriology Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Reference

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Epidemiologic Notes and Reports

Transmission of Measles Across State Lines — Kentucky, New Hampshire, Tennessee, Virginia

A total of 25 cases of measles in 4 states have been linked to a single imported case. This illustrates the problem created by a highly contagious disease that can be spread rapidly without regard to geographic boundaries. States reporting measles associated with this outbreak in the period November 8, 1981-January 9, 1982, included: Virginia (18 cases), New Hampshire (3), Tennessee (3), and Kentucky (1) (Figure 2).

The index patient was a 15-year-old foreign-exchange student from El Salvador who had arrived in the United States on November 3, 1981, with her brother and 47 other Salvadoran students. The students were housed together in a dormitory in Washington, D.C., for 3 days. On November 6, they went to their temporary residences in 19 different states (Figure 3). The index patient went to Lee County, Virginia, and her brother went to Merrimack County, New Hampshire, where both were enrolled in public high schools. She developed a rash on November 8 in Virginia; her brother had rash onset on November 18 in New Hampshire. Both gave histories of having received measles vaccine in El Salvador at age 11-12 years.

Measles – Continued

FIGURE 2. Transmission of measles across state lines, Kentucky, New Hampshire, Tennessee, and Virginia, November 8, 1981-January 11, 1982

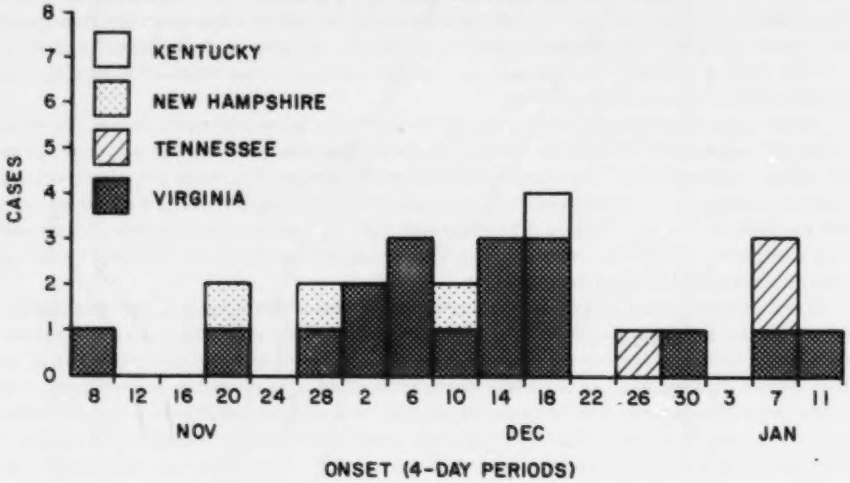
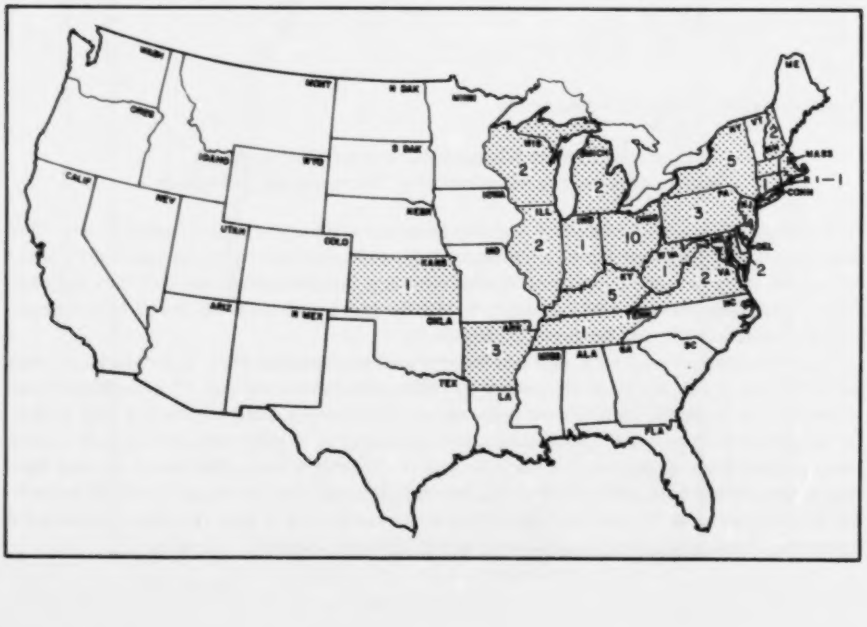


FIGURE 3. States of temporary residence of 49 foreign-exchange students and number of persons exposed to a student with imported measles, December 1981


WASH
OREG
CALIF
NEV
IDAHO
MONT
WYO
UTAH
COLO
ARIZ
N MEX
N DAK
S DAK
NEBR
KANS
1
OKLA
TEX
MINN
IOWA
MO
ARK
3
LA
MISS
ALA
GA
FLA
SC
NC
WIS
2
MICH
2
ILL
2
IND
1
OHIO
10
KY
5
TENN
1
W VA
1
VA
2
2
DEL
PA
3
NY
5
VT
2
NH
MASS
1
1—1
CONN
NJ
ME

Measles – Continued

Measles transmission in Lee County, Virginia (a rural, mountainous region in western Virginia, bordered by Kentucky and Tennessee), began with a high school classmate of the Salvadoran girl, who had rash onset on November 18. By January 9, a total of 17 cases that could be linked to the Salvadoran girl had occurred. One of the patients was a 20-year-old pregnant woman who had rash onset on January 5 following exposure to her 12-year-old brother. After delivering a healthy baby on January 6, the mother developed severe pneumonia that was followed by respiratory arrest. She was resuscitated and transferred to an intensive care unit in a larger hospital nearby in Tennessee. She recovered completely, and her baby remained well. Three additional measles cases occurred involving a 19-year-old woman and 2 pre-school children from Hancock and Sullivan counties, Tennessee. These cases were linked to the cases among school children in contiguous Lee County, Virginia. The woman developed high fever and dehydration, which necessitated her hospitalization. An additional case involved an elementary school student in Harlan County, Kentucky, who had rash onset on December 2, following exposure on a school bus in contiguous Lee County, Virginia.

Record reviews and mandatory school exclusions were instituted at 2 affected schools, and voluntary immunization programs were conducted at several other schools in Lee County, Virginia. A hospital in Sullivan County, Tennessee, excluded 21 employees who had direct contact with the 2 hospitalized patients and could not furnish evidence of immunity to measles.* A special immunization clinic was held in the hospital.

Measles transmission in Merrimack County, New Hampshire, was limited to 2 additional cases: a high school classmate of the Salvadoran boy, who had rash onset on December 1, and his 2-year-old cousin, who had rash onset on December 10. Susceptible contacts of these patients received immune globulin or measles vaccine. Record reviews at the local high school showed that 100% of the students had adequate evidence of immunity to measles.

Of the other 47 exchange students from El Salvador, 46 were contacted in their states of temporary residence and found to be well. One student had become ill and returned to El Salvador; further details of her illness were not available.

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Editorial Note: This was a small but geographically widespread outbreak of measles resulting from a single imported case involving a foreign-exchange student with a history of vaccination abroad. The resulting investigations covered 19 different states and the District of Columbia. When measles transmission occurs across state lines, communication between the states is essential to contain the outbreak successfully.

Outbreaks resulting from importations of measles have been described previously (*1-3*), and imported measles cases are a continuing source of measles in the United States (*4-5*). In 1980 and 1981, the substantial decline in total measles cases led to a rise in the proportion of imported cases.

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*Defined by CDC as a dated record showing administration of live measles vaccine on or after the first birthday or a history of physician-diagnosed measles illness.

Measles – Continued

The illness experienced by the young mother illustrates that serious complications can result from measles in an adult population. Communities can protect themselves from importations of measles by achieving and maintaining high immunization levels. Investigations of imported measles cases should include a search for susceptible contacts at all points of the traveler's itinerary, as well as in the local community. Rapid containment of measles requires effective surveillance and aggressive outbreak-control measures, which include locating and investigating contacts who have crossed state lines.

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TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		10th WEEK ENDING			CUMULATIVE, FIRST 10 WEEKS		
		March 13 1982	March 14 1981	MEDIAN 1977-1981	March 13 1982	March 14 1981	MEDIAN 1977-1981
Aseptic meningitis		66	57	46	737	627	479
Brucellosis		2	–	3	14	12	33
Encephalitis:	Primary (arthropod-borne & unspec.)	14	15	13	128	132	115
	Post-infectious	–	–	3	6	13	27
Gonorrhea:	Civilian	17,781	19,076	18,928	177,564	186,211	181,512
	Military	509	376	442	5,474	5,513	5,361
Hepatitis:	Type A	421	530	530	4,283	4,718	5,170
	Type B	426	380	332	3,486	3,407	2,870
	Non A, Non B	56	N	N	315	N	N
	Unspecified	182	263	201	1,746	1,993	1,878
Legionellosis		4	N	N	48	N	N
Leprosy		8	2	3	28	43	29
Malaria		18	29	13	128	242	85
Measles (rubeola)		33	75	438	131	468	2,627
Meningococcal infections:	Total	83	89	68	614	1,014	639
	Civilian	82	88	67	610	1,012	632
	Military	1	1	1	4	2	2
Mumps		142	115	594	1,026	1,033	3,544
Pertussis		21	12	15	183	189	201
Rubella(German measles)		61	40	332	601	466	1,986
Syphilis (Primary & Secondary):	Civilian	636	540	506	6,282	5,816	4,630
	Military	2	6	6	78	83	60
Tuberculosis		556	506	543	4,587	4,455	4,684
Tularemia		1	3	3	16	19	17
Typhoid fever		7	7	6	69	77	69
Typhus fever, tick-borne (RMSF)		1	–	2	16	11	11
Rabies, animal		109	134	64	855	1,035	561

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Calif. 1)	15	Paralytic	1
Cholera	1	Psittacosis (Mass. 1)	12
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus	9
Leptospirosis	10	Trichinosis (Mass. 1, R.I. 3)	56
Plague	2	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	3

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 13, 1982 and March 14, 1981 (10th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	66	14	128	6	177,564	186,211	421	426	56	182	4	28
NEW ENGLAND	1	–	5	3	4,126	4,729	13	16	–	24	–	1
Maine	1	–	–	–	205	232	2	–	–	–	–	–
N.H.	–	–	–	–	138	175	–	–	–	–	–	–
Vt.	–	–	–	–	87	71	1	1	–	–	–	–
Mass.	–	–	2	–	1,907	1,882	3	6	–	22	–	–
R.I.	–	–	–	–	295	221	1	3	–	–	–	–
Conn.	–	–	3	3	1,494	2,147	6	6	–	2	–	1
MID. ATLANTIC	10	–	17	–	21,989	21,177	53	59	5	14	–	1
Upstate N.Y.	2	–	7	–	3,477	3,198	13	14	–	6	–	–
N.Y. City	2	–	4	–	9,623	8,175	18	14	–	1	–	–
N.J.	6	–	3	–	3,826	4,639	22	31	5	7	–	–
Pa.	–	–	3	–	5,063	5,165	U	U	U	U	–	1
E.N. CENTRAL	6	–	28	1	21,722	30,520	47	51	4	13	–	–
Ohio	–	–	8	–	7,207	11,088	3	12	1	5	–	–
Ind.	–	–	9	1	3,021	2,459	7	4	1	5	–	–
Ill.	–	–	–	–	3,135	8,216	11	5	2	2	–	–
Mich.	6	–	9	–	6,018	6,269	23	29	–	1	–	–
Wis.	–	–	2	–	2,341	2,488	3	1	–	–	–	–
W.N. CENTRAL	1	2	8	–	8,349	8,830	14	12	3	3	2	–
Minn.	–	–	–	–	1,180	1,486	7	2	2	1	–	–
Iowa	–	1	3	–	936	915	2	2	–	2	–	–
Mo.	1	1	3	–	3,792	3,909	2	4	1	–	2	–
N. Dak.	–	–	–	–	108	110	–	–	–	–	–	–
S. Dak.	–	–	–	–	242	238	–	–	–	–	–	–
Nebr.	–	–	1	–	515	675	1	3	–	–	–	–
Kans.	–	–	1	–	1,578	1,497	2	1	–	–	–	–
S. ATLANTIC	7	5	18	1	46,509	46,566	50	91	9	23	1	–
Del.	–	–	–	–	713	719	1	–	–	–	–	–
Md.	1	–	9	–	6,243	4,906	3	13	2	2	–	–
D.C.	–	–	–	–	2,289	3,112	–	2	–	–	–	–
Va.	–	3	5	–	3,843	4,339	6	6	2	2	1	–
W. Va.	–	–	–	–	515	617	–	1	–	–	–	–
N.C.	–	–	1	–	7,587	7,667	1	13	–	9	–	–
S.C.	1	1	–	–	4,239	4,253	15	10	–	3	–	–
Ga.	–	–	–	–	7,650	9,028	2	19	–	3	–	–
Fla.	5	1	3	1	13,430	11,925	22	27	5	4	–	–
E.S. CENTRAL	3	2	7	–	14,914	15,596	19	35	4	1	–	–
Ky.	1	–	–	–	1,992	2,008	11	4	1	–	–	–
Tenn.	–	1	6	–	5,648	5,941	3	18	1	–	–	–
Ala.	2	1	1	–	4,544	4,894	3	10	2	1	–	–
Miss.	–	–	–	–	2,730	2,753	2	3	–	–	–	–
W.S. CENTRAL	8	2	10	–	25,115	26,238	70	27	1	47	–	–
Ark.	–	1	–	–	2,080	1,705	2	1	1	3	–	–
La.	–	–	1	–	4,158	3,993	10	5	–	6	–	–
Okla.	2	1	5	–	2,546	2,584	5	3	–	2	–	–
Tex.	6	–	4	–	16,331	17,956	53	18	–	36	–	–
MOUNTAIN	–	–	6	1	6,779	7,565	31	13	4	9	1	–
Mont.	–	–	–	–	305	285	–	–	–	–	–	–
Idaho	–	–	–	–	267	299	–	–	–	–	–	–
Wyo.	–	–	–	–	204	168	1	–	–	–	–	–
Colo.	–	–	1	1	1,856	1,983	7	2	–	1	–	–
N. Mex.	–	–	–	–	827	880	11	1	–	1	–	–
Ariz.	–	–	2	–	1,826	2,488	12	8	3	4	–	–
Utah	–	–	–	–	256	352	–	1	1	3	1	–
Nev.	–	–	3	–	1,238	1,110	–	1	–	–	–	–
PACIFIC	30	3	29	–	28,061	24,991	124	122	26	48	–	26
Wash.	1	–	2	–	2,392	2,477	13	14	3	1	–	2
Oreg.	–	–	–	–	1,537	2,014	7	7	2	2	–	–
Calif.	23	3	26	–	22,927	19,205	100	99	21	45	–	17
Alaska	3	–	1	–	722	695	1	–	–	–	–	–
Hawaii	3	–	–	–	483	600	3	2	–	–	–	7
Guam	U	–	–	–	5	35	U	U	U	U	U	–
P.R.	1	–	1	–	528	636	7	2	–	1	–	–
V.I.	U	–	–	–	41	7	U	U	U	U	U	–
Pac. Trust Terr.	U	–	–	–	36	99	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 13, 1982 and March 14, 1981 (10th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	18	128	33	131	468	83	614	142	1,026	21	61	601	466
NEW ENGLAND	3	10	–	4	17	5	26	5	64	–	1	11	50
Maine	–	–	–	–	–	–	2	–	18	–	–	–	30
N.H.	–	1	–	–	3	1	7	2	8	–	–	9	18
Vt.	–	–	–	2	1	–	1	–	3	–	–	–	–
Mass.	3	6	–	–	9	1	2	–	21	–	1	2	2
R.I.	–	1	–	–	–	1	3	1	7	–	–	–	–
Conn.	–	2	–	2	4	2	11	2	7	–	–	–	–
MID. ATLANTIC	2	11	6	24	161	12	94	13	65	2	5	23	56
Upstate N.Y.	–	2	2	13	121	4	28	1	18	2	3	15	25
N.Y. City	–	4	4	9	13	1	17	3	12	–	2	8	10
N.J.	2	3	–	–	9	2	24	6	16	–	–	–	19
Pa.	–	2	–	7	18	5	25	3	23	–	–	–	2
E.N. CENTRAL	3	11	5	11	32	4	62	75	512	4	9	49	94
Ohio	–	1	2	2	11	–	22	45	308	3	4	4	–
Ind.	–	1	–	1	2	1	5	–	17	1	–	5	32
Ill.	–	–	–	2	5	–	13	–	24	–	1	11	25
Mich.	3	8	4	6	14	2	21	30	101	–	3	15	10
Wis.	–	1	–	–	–	1	1	–	62	–	1	14	27
W.N. CENTRAL	–	4	–	–	4	3	25	12	41	–	–	13	24
Minn.	–	–	–	–	1	2	7	–	3	–	–	1	6
Iowa	–	1	–	–	1	–	3	2	12	–	–	–	–
Mo.	–	1	–	–	–	–	9	6	9	–	–	8	–
N. Dak.	–	–	–	–	–	1	3	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	–	1	–
Nebr.	–	1	–	–	1	–	1	–	–	–	–	–	–
Kans.	–	1	–	–	1	–	2	4	17	–	–	3	18
S. ATLANTIC	2	23	3	15	129	21	136	9	103	3	4	17	43
Del.	–	–	–	–	–	–	–	2	2	–	–	–	–
Md.	–	5	1	1	–	–	6	1	7	–	3	4	–
D.C.	–	3	–	1	1	–	–	–	–	1	–	–	–
Va.	1	8	1	9	3	–	11	1	14	–	–	8	–
W. Va.	–	–	–	1	6	1	4	5	52	–	–	1	10
N.C.	–	–	–	–	–	4	25	–	4	–	–	–	2
S.C.	–	2	–	–	–	5	17	–	3	–	–	1	4
Ga.	–	2	–	–	48	6	39	–	2	1	–	1	12
Fla.	1	3	1	3	71	5	34	–	19	1	1	2	15
E.S. CENTRAL	–	–	–	4	–	5	42	1	16	–	1	8	11
Ky.	–	–	–	1	–	–	2	–	7	–	1	8	7
Tenn.	–	–	–	3	–	1	20	1	5	–	–	–	4
Ala.	–	–	–	–	–	4	19	–	2	–	–	–	–
Miss.	–	–	–	–	–	–	1	–	2	–	–	–	–
W.S. CENTRAL	–	5	4	16	20	11	83	1	47	–	4	33	29
Ark.	–	1	–	–	–	1	8	–	3	–	–	–	–
La.	–	–	–	–	–	1	6	–	–	–	–	–	2
Okla.	–	–	–	–	2	–	6	–	–	–	–	1	–
Tex.	–	4	4	16	18	9	63	1	44	–	4	32	27
MOUNTAIN	–	3	–	–	8	10	40	2	24	2	–	10	21
Mont.	–	–	–	–	–	1	4	2	3	–	–	–	1
Idaho	–	–	–	–	–	1	3	–	2	–	–	–	1
Wyo.	–	–	–	–	–	–	2	–	1	1	–	3	1
Colo.	–	2	–	–	–	2	16	–	3	–	–	1	14
N. Mex.	–	–	–	–	–	6	7	–	–	1	–	1	–
Ariz.	–	1	–	–	1	–	4	–	8	–	–	1	1
Utah	–	–	–	–	–	–	1	–	5	–	–	3	2
Nev.	–	–	–	–	7	–	3	–	2	–	–	1	1
PACIFIC	8	61	14	57	97	12	106	24	150	10	37	437	138
Wash.	2	4	–	14	1	–	11	5	23	2	7	13	26
Oreg.	–	2	–	–	–	3	21	–	–	–	1	2	20
Calif.	6	54	14	42	96	8	68	19	123	8	29	420	92
Alaska	–	–	–	–	–	–	4	–	3	–	–	1	–
Hawaii	–	1	–	1	–	1	2	–	1	–	–	1	–
Guam	U	–	U	–	3	U	–	U	1	U	U	1	–
P.R.	–	1	10	29	46	–	2	1	10	2	–	2	–
V.I.	U	–	U	–	2	U	–	U	–	U	U	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 13, 1982 and March 14, 1981 (10th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	6,282	5,816	556	4,587	16	7	69	1	16	855
NEW ENGLAND	117	135	14	125	-	1	7	-	-	5
Maine	-	1	-	8	-	-	-	-	-	5
N.H.	-	7	-	6	-	-	-	-	-	-
Vt.	-	2	1	5	-	-	2	-	-	-
Mass.	85	82	12	80	-	1	4	-	-	-
R.I.	8	10	-	16	-	-	-	-	-	-
Conn.	24	33	1	10	-	-	1	-	-	-
MID. ATLANTIC	851	873	116	748	1	-	5	-	-	9
Upstate N.Y.	70	78	27	135	1	-	1	-	-	5
N.Y. City	547	549	50	275	-	-	4	-	-	-
N.J.	95	102	5	140	-	-	-	-	-	1
Pa.	139	144	34	198	-	-	-	-	-	3
E.N. CENTRAL	229	393	88	742	-	-	5	-	-	89
Ohio	64	54	15	137	-	-	2	-	-	11
Ind.	45	24	10	105	-	-	-	-	-	11
Ill.	41	220	31	280	-	-	1	-	-	27
Mich.	60	75	29	178	-	-	2	-	-	-
Wis.	19	20	3	42	-	-	-	-	-	40
W.N. CENTRAL	123	108	32	131	5	-	2	-	1	234
Minn.	22	35	4	23	-	-	-	-	-	52
Iowa	3	5	4	22	-	-	1	-	1	78
Mo.	75	58	19	53	4	-	1	-	-	26
N. Dak.	3	1	-	2	-	-	-	-	-	30
S. Dak.	-	-	-	3	-	-	-	-	-	12
Nebr.	3	3	-	4	-	-	-	-	-	17
Kans.	17	6	5	24	1	-	-	-	-	19
S. ATLANTIC	1,755	1,517	92	939	5	2	9	-	10	149
Del.	2	3	-	9	-	-	-	-	-	-
Md.	110	114	14	131	1	1	3	-	7	9
D.C.	112	140	9	38	-	-	-	-	-	-
Va.	118	142	10	86	1	-	2	-	-	78
W. Va.	6	3	4	22	-	1	2	-	-	6
N.C.	140	109	9	153	-	-	-	-	3	-
S.C.	95	109	5	79	3	-	-	-	-	8
Ga.	375	388	14	151	-	-	-	-	-	39
Fla.	797	509	27	270	-	-	2	-	-	9
E.S. CENTRAL	505	420	22	384	1	-	7	-	3	88
Ky.	28	19	4	103	-	-	-	-	-	12
Tenn.	132	164	12	137	1	-	2	-	-	58
Ala.	167	119	6	121	-	-	5	-	3	18
Miss.	178	118	-	23	-	-	-	-	-	-
W.S. CENTRAL	1,657	1,400	65	438	2	-	3	1	1	133
Ark.	46	25	8	38	1	-	-	-	-	19
La.	347	291	9	89	-	-	-	-	-	3
Okla.	29	27	11	78	1	-	2	-	-	33
Tex.	1,235	1,057	37	233	-	-	1	1	1	78
MOUNTAIN	179	139	11	120	1	-	3	-	-	15
Mont.	1	5	-	11	-	-	-	-	-	10
Idaho	13	2	2	6	-	-	-	-	-	-
Wyo.	7	2	-	3	-	-	-	-	-	1
Colo.	58	40	-	15	-	-	-	-	-	-
N. Mex.	34	30	4	21	-	-	2	-	-	2
Ariz.	32	33	5	44	-	-	1	-	-	2
Utah	5	2	-	5	1	-	-	-	-	-
Nev.	29	25	-	15	-	-	-	-	-	-
PACIFIC	866	831	116	960	1	4	28	-	1	133
Wash.	24	31	11	58	1	-	-	-	-	-
Oreg.	32	18	9	37	-	-	1	-	-	-
Calif.	781	763	91	805	-	4	26	-	1	100
Alaska	6	1	-	13	-	-	-	-	-	33
Hawaii	23	18	5	47	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	90	144	-	30	-	-	-	-	-	6
V.I.	-	-	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 13, 1982 (10th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	665	458	131	33	20	22	43
Boston, Mass.	175	115	34	13	6	7	15
Bridgeport, Conn.	41	30	6	3	–	2	4
Cambridge, Mass.	28	23	3	2	–	–	2
Fall River, Mass.	30	22	8	–	–	–	–
Hartford, Conn.	59	40	11	1	3	4	2
Lowell, Mass.	40	19	11	3	5	2	1
Lynn, Mass.	18	12	6	–	–	–	–
New Bedford, Mass.	27	21	5	–	–	1	–
New Haven, Conn.	64	39	17	4	4	–	2
Providence, R.I. §	57	55	–	–	1	–	4
Somerville, Mass.	14	9	3	2	–	–	–
Springfield, Mass.	32	19	8	2	–	3	7
Waterbury, Conn.	28	22	4	–	–	2	4
Worcester, Mass.	52	32	15	3	1	1	2
MID. ATLANTIC	2,809	1,851	659	153	78	68	148
Albany, N.Y.	52	36	12	4	–	–	–
Allentown, Pa.	25	18	6	–	–	–	1
Buffalo, N.Y.	150	99	39	5	3	4	9
Camden, N.J.	45	26	16	1	1	1	3
Elizabeth, N.J.	33	25	7	1	–	–	2
Erie, Pa.†	49	30	15	2	1	1	2
Jersey City, N.J.	57	36	14	1	2	4	1
N.Y. City, N.Y.	1,504	1,005	335	94	38	32	72
Newark, N.J.	89	34	30	9	12	4	4
Paterson, N.J.	23	12	4	2	4	1	3
Philadelphia, Pa.†	314	167	90	17	12	8	29
Pittsburgh, Pa.†	100	70	23	5	–	2	2
Reading, Pa.	29	26	3	–	–	–	5
Rochester, N.Y.	123	97	18	4	1	3	9
Schenectady, N.Y.	25	19	4	1	1	–	1
Scranton, Pa.†	24	15	9	–	–	–	–
Syracuse, N.Y.	93	63	18	7	1	4	–
Trenton, N.J.	27	18	7	–	1	1	1
Utica, N.Y.	21	15	4	–	1	1	–
Yonkers, N.Y.	25	20	3	–	–	2	4
E.N. CENTRAL	2,350	1,424	598	143	80	105	41
Akron, Ohio	37	25	9	1	–	2	–
Canton, Ohio	41	31	8	1	1	–	–
Chicago, Ill.	563	307	158	41	19	38	9
Cincinnati, Ohio	145	92	33	10	4	6	6
Cleveland, Ohio	177	81	61	15	9	11	1
Columbus, Ohio	140	67	43	11	11	8	1
Dayton, Ohio	116	80	21	8	3	4	1
Detroit, Mich.	262	145	71	15	13	18	3
Evansville, Ind.	57	49	6	2	–	–	1
Fort Wayne, Ind.	49	32	16	1	–	–	1
Gary, Ind.	21	12	6	2	1	–	–
Grand Rapids, Mich.	57	40	13	3	1	–	–
Indianapolis, Ind.	169	108	34	16	6	5	2
Madison, Wis.	40	23	11	2	3	1	–
Milwaukee, Wis.	151	107	27	8	2	7	3
Peoria, Ill.	62	48	11	1	1	1	5
Rockford, Ill.	54	37	15	1	1	–	1
South Bend, Ind.	47	32	11	2	2	–	2
Toledo, Ohio	98	68	23	1	3	3	5
Youngstown, Ohio	64	40	21	2	–	1	–
W.N. CENTRAL	765	520	153	37	21	34	38
Des Moines, Iowa	62	44	13	4	–	1	–
Duluth, Minn.	30	21	7	–	2	–	3
Kansas City, Kans.	33	15	9	3	–	6	2
Kansas City, Mo.	124	77	33	6	3	5	4
Lincoln, Nebr.	28	20	5	–	1	2	1
Minneapolis, Minn.	104	78	17	2	3	4	2
Omaha, Nebr.	79	50	14	5	3	7	1
St. Louis, Mo.	179	126	27	12	6	8	12
St. Paul, Minn.	70	51	15	3	1	–	3
Wichita, Kans.	56	38	13	2	2	1	10
S. ATLANTIC	1,186	727	317	79	22	41	52
Atlanta, Ga.	159	86	47	18	4	4	8
Baltimore, Md.	91	49	22	10	4	6	1
Charlotte, N.C.	72	40	24	3	1	4	5
Jacksonville, Fla.	120	72	35	5	1	7	3
Miami, Fla.	124	67	39	14	3	1	3
Norfolk, Va.	59	40	15	2	–	2	5
Richmond, Va.	80	45	25	6	2	2	6
Savannah, Ga.	50	30	14	3	–	3	5
St. Petersburg, Fla.	118	101	13	3	–	1	5
Tampa, Fla.	68	43	21	1	2	1	2
Washington, D.C.	189	114	51	12	4	8	5
Wilmington, Del.	56	40	11	2	1	2	4
E.S. CENTRAL	708	443	183	36	15	31	25
Birmingham, Ala.	114	62	33	9	4	6	1
Chattanooga, Tenn.	56	33	11	5	1	6	3
Knoxville, Tenn.	49	39	10	–	–	–	–
Louisville, Ky.	102	58	34	4	1	5	1
Memphis, Tenn.	165	119	36	5	3	2	9
Mobile, Ala.	72	44	16	5	3	4	4
Montgomery, Ala.	35	21	8	3	–	3	–
Nashville, Tenn.	115	67	35	5	3	5	7
W.S. CENTRAL	1,140	683	266	68	61	62	44
Austin, Tex.	32	23	2	1	4	2	3
Baton Rouge, La.	54	37	7	1	3	6	4
Corpus Christi, Tex.	43	35	6	1	–	1	1
Dallas, Tex.	225	130	52	22	14	7	7
El Paso, Tex.	76	51	12	5	2	6	5
Fort Worth, Tex.	99	55	25	3	1	15	4
Houston, Tex.	160	87	34	12	14	13	2
Little Rock, Ark.	83	48	22	5	5	3	3
New Orleans, La.	78	51	20	2	2	3	2
San Antonio, Tex.	154	88	43	10	10	3	4
Shreveport, La.	19	9	10	–	–	–	1
Tulsa, Okla.	117	69	33	6	6	3	8
MOUNTAIN	755	446	169	58	50	32	42
Albuquerque, N. Mex.	95	31	20	18	24	2	2
Colo. Springs, Colo.	43	30	8	3	1	1	7
Denver, Colo.	126	76	35	7	4	4	2
Las Vegas, Nev.	80	45	21	7	6	1	4
Ogden, Utah	19	14	1	3	1	–	1
Phoenix, Ariz.	185	122	37	9	7	10	13
Pueblo, Colo.	34	25	6	2	–	1	3
Salt Lake City, Utah	52	21	12	4	5	10	2
Tucson, Ariz.	121	82	29	5	2	3	8
PACIFIC	1,963	1,248	455	131	54	75	97
Berkeley, Calif.	17	13	2	2	–	–	1
Fresno, Calif.	67	31	26	1	4	5	3
Glendale, Calif.	25	22	3	–	–	–	2
Honolulu, Hawaii	54	28	15	6	3	2	–
Long Beach, Calif.	99	67	23	5	1	3	3
Los Angeles, Calif.	664	410	158	54	19	23	23
Oakland, Calif.	74	52	12	6	2	2	3
Pasadena, Calif.	37	25	9	1	–	2	1
Portland, Oreg.	122	80	22	9	4	7	10
Sacramento, Calif.	71	44	19	4	1	3	2
San Diego, Calif.	165	112	40	7	2	4	19
San Francisco, Calif.	153	102	29	9	4	9	4
San Jose, Calif.	177	99	50	14	7	7	12
Seattle, Wash.	127	84	24	9	6	4	3
Spokane, Wash.	67	45	18	2	–	2	8
Tacoma, Wash.	44	34	5	2	1	2	3
TOTAL	12,341††	7,800	2,931	738	401	470	530

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Current Trends

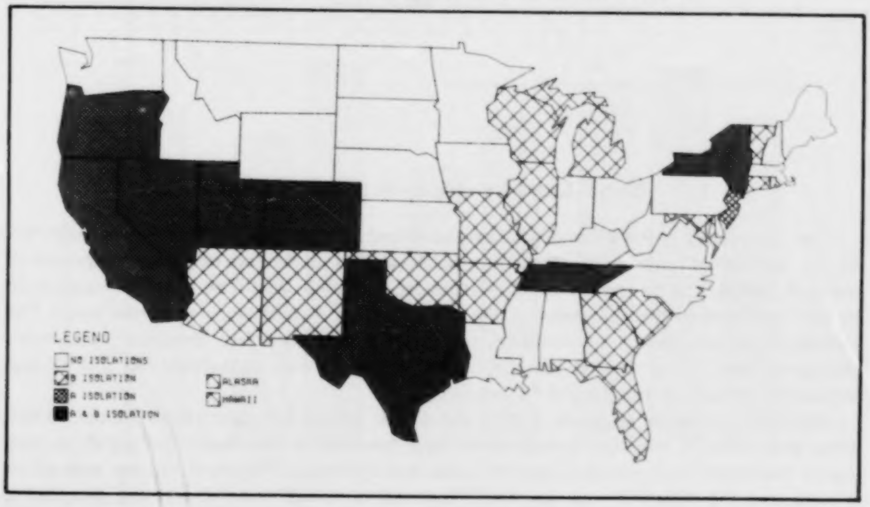
Influenza Update — United States

Influenza activity in the 1981-1982 influenza season continues to be at a relatively low level. Isolations of influenza type B virus have been reported by 23 states (including the first reports this season from Alaska, Maryland, Missouri, and Oklahoma); 8 of these states have also reported isolating type A(H1N1) virus, and 1 state, New Jersey, has reported isolating type A(H1N1) virus only (Figure 4). From October 1981 through February 1982, the total number of viruses isolated by laboratories participating in the nationwide reporting system was about 200. This compared with about 1,500 isolates reported by the participating laboratories in the United States in each of the 3 preceding winters, reflecting the generally low levels of morbidity throughout the country this winter.

The actual extent of virus transmission may not be fully indicated by nationwide laboratory reports in the absence of major outbreaks which cause concern to public health authorities and physicians. Thus, in Houston, Texas, where all patients with acute febrile respiratory illness are cultured for viral isolates when seen by a group of sentinel physicians and clinics participating in a long-term virus surveillance system, more than 500 isolates of influenza virus were obtained through February 1982. Preliminary analysis of a random sample from a survey of Houston city schools indicates that even during the peak of virus isolations in Houston during the third week of February, when 41% (114/277) of cultures were positive for influenza, only moderate increases of overall school absenteeism rates occurred in the Houston Independent School District. This pattern of moderate increases is consistent with findings in other communities where influenza viruses have been isolated in smaller numbers than in Houston.

The ratio of pneumonia-influenza related deaths has barely exceeded the statistically established threshold level in the 1981-1982 season. In contrast, the ratio consistently exceed-

FIGURE 4. Influenza virus isolations, United States, 1981-1982 season



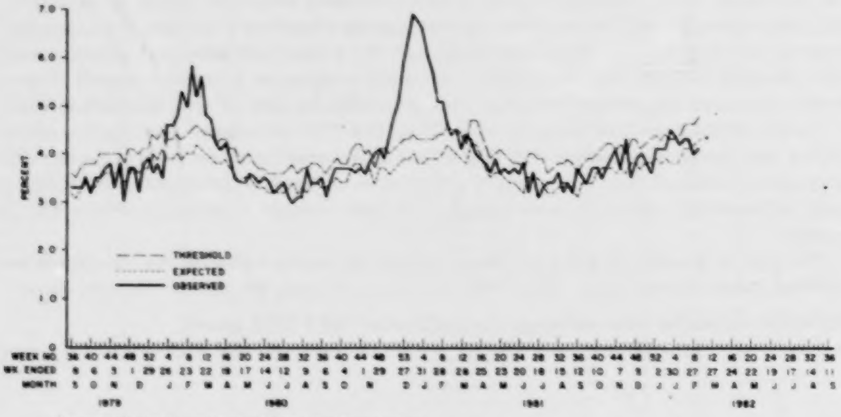
Influenza – Continued

ed the threshold level by a wide margin for a substantial period during each of the 2 previous winters (Figure 5).

Although most isolates of influenza virus this season were obtained from children and young adults, 1 outbreak of influenza has been reported in a nursing home in St. Louis County, Missouri, where about 34 of 120 residents experienced an influenza-like illness during 1 week. On March 4, shortly after the outbreak began, influenza type B virus was isolated from 8 elderly patients.

Reported by P Glezen, MD, Influenza Research Center, Baylor University, J Craven, MD, Houston City Health Department, R Beauchamp, MD, C Webb, Jr, MD, State Epidemiologist, Texas State Dept of Health; KL Scruggs, MD, St Louis County, WC Banton, II, MD, District 7, ER Spurrier, PhD, D Donnell, Jr, MD, State Epidemiologist, Missouri Dept of Social Svcs; other state laboratory directors and state epidemiologists; Field Services Division, Consolidated Surveillance and Communications Activity, Epidemiology Program Office, Influenza Br, Viral Diseases Div, Center for Infectious Diseases, CDC.

FIGURE 5. Observed and expected ratio of deaths attributed to pneumonia and influenza in 121 United States cities, 1979-1982



*FORECASTS ARE MADE AT 4-WEEK INTERVALS EXCEPT DURING EPIDEMIC PERIODS

Blood-Lead Levels in U.S. Population

One component of the Second National Health and Nutrition Examination Survey (NHANES II) (*1*), conducted between 1976-1980, was developed to measure degrees of exposure of the U.S. population to certain toxic substances, including lead. The primary measure of human exposure to this substance is the determination of lead levels in whole blood. The NHANES II sample design is a stratified, multistage, probability cluster sample of households throughout the United States, selected to represent the non-institutionalized U.S. civilian population between 6 months and 74 years of age.

Preliminary analysis suggests that in the 4-year period February 1976-February 1980 there was a 36.7% reduction in the overall mean blood-lead level from 15.8 µg/dL to 10.0 µg/dL. Decreases were found in all races, ages, and both sexes (Figure 6). Further analysis indicates that the reduction was not due to seasonal sampling, income sampling, geographic

Blood-Lead Levels – Continued

region sampling, urban vs. rural sampling, laboratory-measurement error, or chance.

The most discernible change in environmental lead sources was the reduced use of lead in gasoline as measured by 3 separate data sets (Figure 7). Figure 8 presents a comparison over the 4-year period of the amount of lead used in gasoline production and the NHANES II mean blood-lead concentrations. The decrease in mean blood-lead levels reflects the decrease in lead used in gasoline production.

Reported by National Center for Health Statistics, and Center for Environmental Health (CDC).

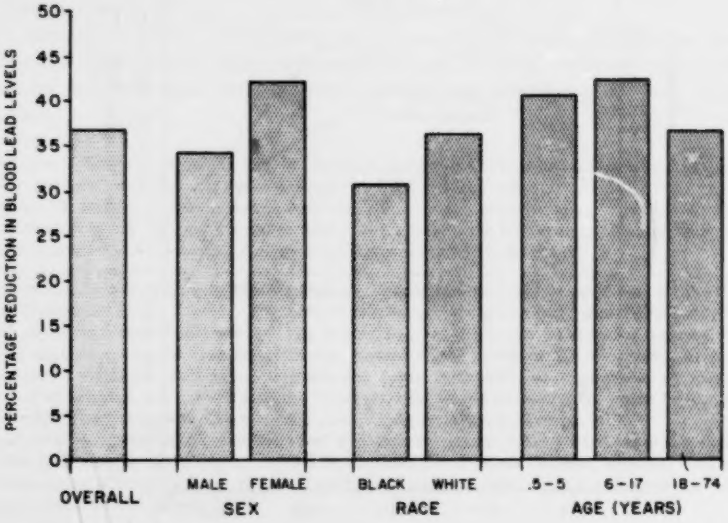
Editorial Note: Although the decrease in mean blood-lead levels was dramatic, the problem of pediatric lead poisoning in the United States has not been solved. In 1980, 502,900 children were reported to have been screened, and 26,500 were identified with lead toxicity (*2*). The reduction in mean blood-lead levels does mean that the high-risk young children living in environments with high-dose sources of lead (i.e., leaded paint, lead already deposited in dust and soil, etc.) will have a greater margin of safety. If the current downward trend in the amount of lead used in gasoline production continues, that margin of safety is expected to increase.

References

1. Plan and Operation of Second National Health and Nutrition Examination Survey, 1976-1980. Washington, D.C.: National Center for Health Statistics, 1977. (Vital and Health Statistics. PHS Pub. No. 81-1317, Series 1-No. 15, Public Health Service, U.S. Govt. Printing Office).
2. CDC. Annual summary 1980: reported morbidity and mortality in the United States. MMWR 1981:29(54).

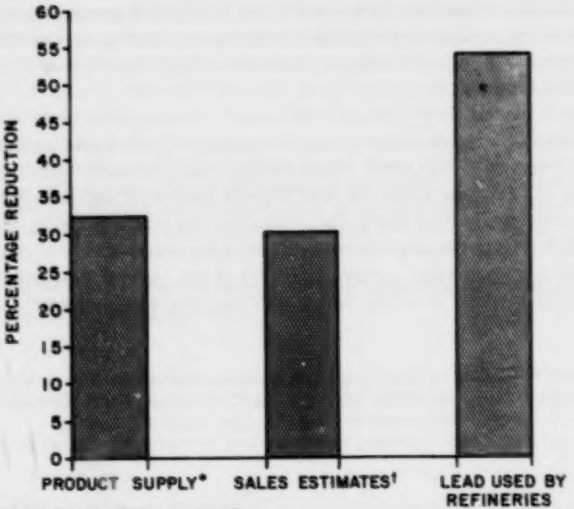
Note: Technical inquiries should be addressed to Division of Health Examination and Statistics, National Center for Health Statistics, 3700 East West Highway, Hyattsville, Maryland 20782.

FIGURE 6. Percentage reduction in blood-lead levels, NHANES II, February 1976-February 1980



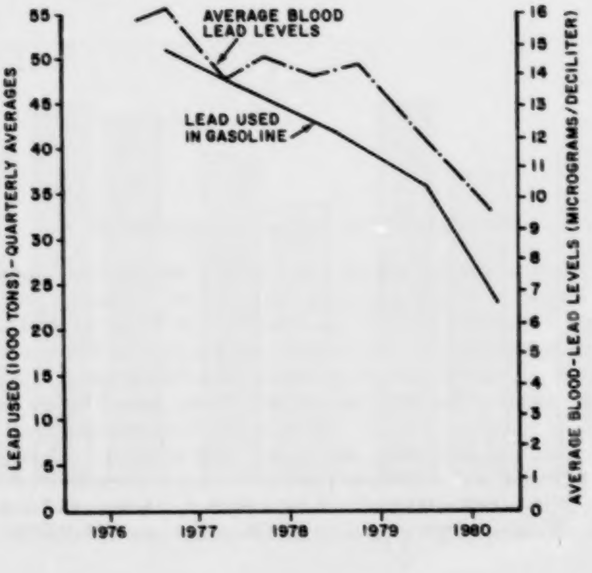
Blood-Lead Levels – Continued

FIGURE 7. Percentage reduction in production/use of leaded gasoline, United States, 1976-1980



*Data from 1977-1980 (1976 not available).
†Excludes military.

FIGURE 8. Lead used in gasoline production and average NHANES II blood-lead levels, February 1976-February 1980



Epidemiologic Notes and Reports

Human Rabies — Rwanda

On May 7, 1981, a 29-year-old American woman living in Kigali, Rwanda, was bitten several times on the right foot and probably the left hand by a dog that later escaped. The patient immediately sought medical attention. Her wounds were sutured, and the first dose of human diploid cell vaccine was given intramuscularly later that morning (day 0) and on days 3, 7, and 14. No human rabies globulin was given at that time. Twenty-two days later, she had fever and paresthesias of the left arm and rapidly became lethargic with paresis of arms and legs, dysarthria, and bilaterial facial paresis. She was flown to a Belgian hospital 26 days after the bites, where she was treated intramuscularly with 20 International Units (IU) of human rabies immune globulin/kg body weight. She rapidly developed a flaccid quadraplegia and coma, and died 62 days after being bitten.

Immunofluorescence and isolation studies for rabies virus were negative; however, rabies antibody titer was 827 IU/ml in the serum, and 82 IU/ml in the cerebrospinal fluid (CSF). No previous exposure to another animal was reported.

Reported by J Devriendt, MD, M Staroukine, MD, Hospital Universitaire Brugmann, Brussels, Belgium; Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Rabies antibody, especially in such high titers, has not been reported in the CSF of persons who have received only rabies vaccine. However, high titers of rabies antibody do occur with clinical rabies, and such high CSF antibody levels are commonly accepted as diagnostic for rabies. Therefore, the diagnosis of rabies is most probable for this patient. Despite the prompt and correct use of the human diploid cell rabies vaccine, human rabies immune globulin was omitted from this patient's initial post-exposure prophylactic regimen, and may be related to the failure of treatment. Studies have shown that the combination of human rabies immune globulin plus vaccine is better than either alone in preventing rabies (*1,2*), presumably because globulin provides passive antibody protection during the period when vaccine has not yet induced active antibody protection.

This episode, by demonstrating that even the new, highly potent human diploid cell vaccine cannot by itself prevent rabies, reinforces the need for human rabies immune globulin for all persons receiving post-exposure rabies prophylaxis who have not had prior rabies vaccination.

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The Morbidity and Mortality Weekly Report, circulation 104,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Erratum, Vol. 31, No. 9

p118. In the article "Surveillance of Childhood Lead Poisoning—United States" in the first sentence of the third paragraph the words "and adults" should be deleted. The sentence should read: "Since 1973, childhood lead-poisoning prevention programs have reported screening almost 3,900,000 children, 243,000 (6.2%) with lead toxicity."

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31/11

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Genital Herpes Infection – United States, 1966-1979

CDC has analyzed data on genital herpes infection collected by the National Disease and Therapeutic Index (NDTI).* This analysis supports the widely held contention that an epidemic of genital herpes infection occurred in the United States from 1966 to 1979—the most recent year for which data are available.

The estimated number and rate of consultations with physicians for genital herpes infection both increased markedly from 1966 to 1979 (Figure 1). The number of consultations for genital herpes infection increased from 29,560 in 1966 to 260,890 in 1979. The rate at which patients consulted fee-for-service office-based physicians for genital herpes infection increased almost 9-fold from 3.4/100,000 consultations in 1966 to 29.2/100,000 in 1979.

In contrast, the NDTI survey showed a less than 2-fold increase in the rate of consultations for oral herpes infection (comprised of conditions cited as herpes labialis and herpes stomatitis) and for ocular herpes infection (Figure 2). Three other codes used in the NDTI survey are herpes febrilis, herpes simplex, and herpes "not otherwise stated." The trend in the rates of these physician contacts is depicted in Figure 3.

The only other national data set available for estimating the number of consultations with U.S. private physicians for herpes infection is the National Ambulatory Medical Care Survey (NAMCS), a study conducted by the National Center for Health Statistics. NAMCS first used a separate code for genital herpes in 1979. The NAMCS-estimated number of consultations for all types of herpes infection increased from 838,000 in 1973 (earliest data available) to 937,000 in 1979 (latest data available), an 11.8% increase. For that same period (1973-1979), the NDTI data showed an increase in all types of herpes infection of 9.9%.

Reported by Venereal Disease Control Div, Center for Prevention Svcs, CDC.

Editorial Note: Social, demographic, and behavioral changes within the U.S. population during the 1970s have placed an increased proportion of that population at risk for sexually transmitted diseases such as genital herpes infection (*1-4*). The observed increase in rate and number of consultations for genital herpes infection supports the observations of gynecologists who have noted an increase in patient visits for genital herpes infection (*5-7*).

The increased incidence of genital herpes infection is particularly noteworthy for several reasons (*4*): clinical manifestations of the infection tend to recur, and no specific treatment is available to prevent recurrence; there is an association between genital herpes infection and the development of cervical cancer; and infections of newborns acquired during passage

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*The NDTI survey is a national, stratified, random sample of data from patient consultations with physicians in fee-for-service office-based practice in the United States (excluding Hawaii and Alaska). Included in the sample are all consultations between patients and sample physicians in an office, hospital, or nursing home, or in the form of a house call or telephone conversation. The survey procedure does not include a confirmation of the physician's diagnosis.

HE 20. 7009:

Genital Herpes – Continued

through the birth canal are often life threatening.

The total number of consultations for this infection in the United States cannot be estimated on the basis of NDTI data. Patients with genital herpes infection may seek care in public health care facilities and from other private ambulatory-care providers—hospital emergency rooms, prepaid practices, outpatient departments of community hospitals—which are not included in the survey. Therefore, the total number of health care consultations for genital herpes infection in the United States is unknown. However, the upward trend of cases diagnosed in private-physician practices supports the contention of an ongoing epidemic of genital herpes infection.

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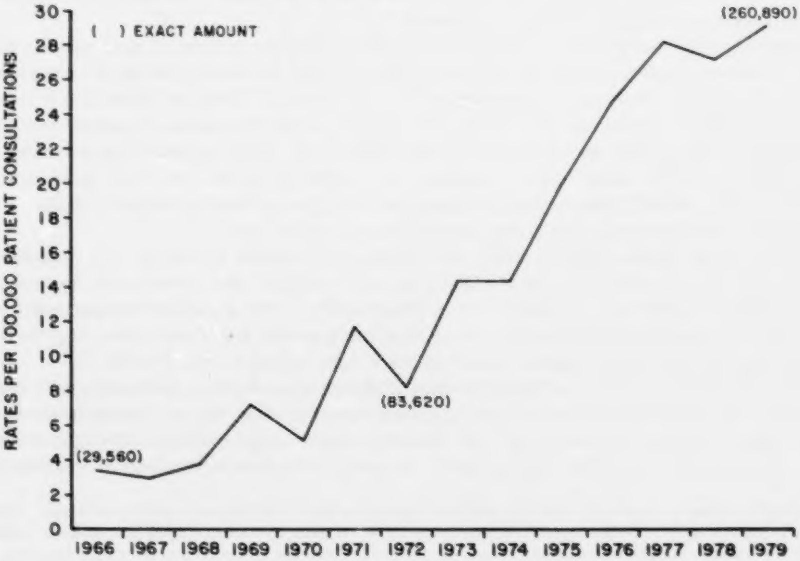
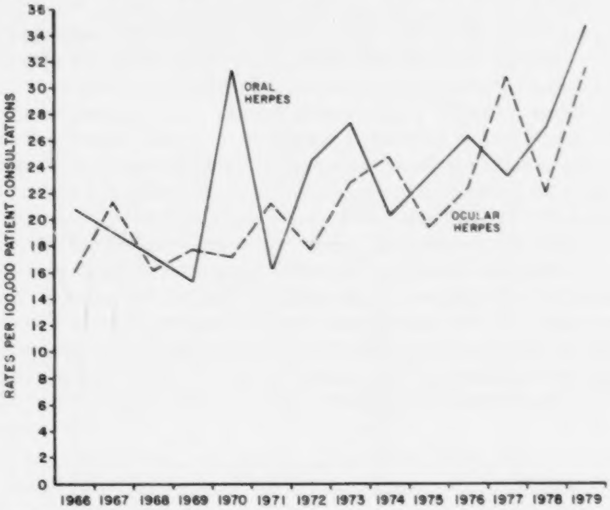
FIGURE 1. Estimated rates of patient consultations* with private physicians for genital herpes infection, United States, 1966-1979



*Data Source: IMS America, NDTI.

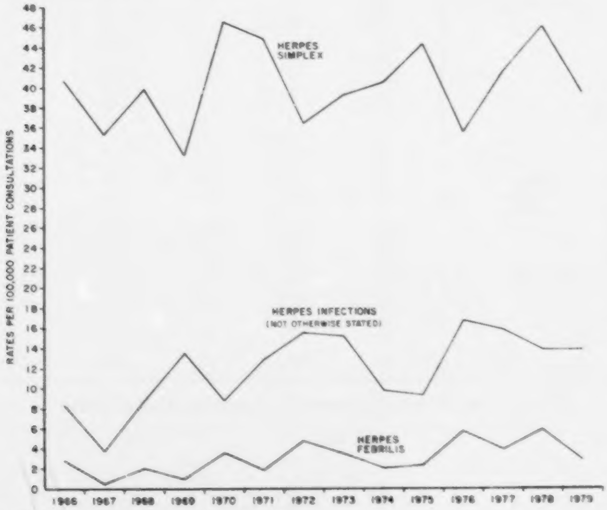
Genital Herpes — Continued

FIGURE 2. Estimated rates of patient consultations* with private physicians for oral herpes infection and ocular herpes infection, United States, 1966-1979



*Data Source: IMS America, NDTI.

FIGURE 3. Estimated rates of patient consultations* for herpes infection (site unspecified),† United States, 1966-1979



*Data Source: IMS America, NDTI.
†Herpes febrilis, herpes simplex and herpes "not otherwise stated."

Current Trends

Influenza Update — United States

During the week ending March 19, 1982, 6 states reported their first influenza virus isolates of the season; in Iowa, Minnesota, Nebraska, and Virginia influenza B viruses were recovered in early March from children or young adults with sporadic illnesses, and in Pennsylvania and Washington influenza A(H1N1) viruses were isolated from a 3-year-old and from a 50-year-old in late February and early March, respectively. In Tucson, Arizona, where influenza B virus had caused some school outbreaks in January (1), a school outbreak caused by influenza A(H1N1) virus occurred in mid-March. During the 1981-1982 season, a total of 9 states have reported influenza A(H1N1) and influenza B virus isolates, 20 states have reported only influenza B virus isolates, and 3 states have reported only influenza A(H1N1) virus isolates. The overall level of influenza activity for the nation remains low compared with recent years.

Increased spread of influenza virus to previously unaffected communities, however, documented in recent weeks by virus isolation and morbidity reports, has now been accompanied by the first report of influenza-associated mortality in a nursing home outbreak. From the last week of February to the middle of March approximately 38 cases of influenza-like illness occurred among 116 elderly residents of a home in Cobb County, Georgia, with the peak of new

(Continued on page 145)

TABLE I. Summary — cases of specified notifiable diseases, United States

DISEASE		11th WEEK ENDING			CUMULATIVE, FIRST 11 WEEKS		
		March 20 1982	March 21 1981	MEDIAN 1977-1981	March 20 1982	March 21 1981	MEDIAN 1977-1981
Aseptic meningitis		75	70	50	810	696	529
Brucellosis		1	1	1	15	13	34
Encephalitis:	Primary (arthropod-borne & unspec.)	10	22	11	140	154	126
	Post-infectious	1	4	4	7	17	33
Gonorrhea:	Civilian	16,481	18,119	18,119	194,130	204,352	200,529
	Military	251	503	546	5,725	6,016	5,935
Hepatitis:	Type A	435	485	585	4,729	5,198	5,776
	Type B	405	413	335	3,897	3,821	3,253
	Non A, Non B	41	N	N	357	N	N
	Unspecified	193	232	191	1,938	2,224	2,134
Legionellosis		2	N	N	50	N	N
Leprosy		1	3	2	29	46	32
Malaria		16	18	17	144	261	102
Measles (rubeola)		37	71	357	166	539	2,983
Meningococcal infections:	Total	85	103	78	698	1,119	724
	Civilian	85	103	76	694	1,117	717
	Military	–	–	–	4	2	5
Mumps		196	135	364	1,221	1,168	3,908
Pertussis		20	23	23	203	212	222
Rubella (German measles)		56	58	278	653	524	2,327
Syphilis (Primary & Secondary):	Civilian	690	652	493	6,972	6,468	5,136
	Military	7	–	4	85	83	64
Tuberculosis		456	543	547	5,041	4,990	5,296
Tularemia		–	–	–	16	20	18
Typhoid fever		8	14	12	77	91	79
Typhus fever, tick-borne (RMSF)		1	1	1	17	12	12
Rabies, animal		108	192	82	960	1,227	643

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Calif. 1)	16	Paralytic	1
Cholera	1	Psittacosis (Mass. 1)	13
Congenital rubella syndrome	–	Rabies, human	–
Diphtheria	–	Tetanus	9
Leptospirosis (N.J. 1, Kans. 1)	12	Trichinosis (NYC 1, Mo. 1)	58
Plague	2	Typhus fever, flea-borne (endemic, murine)	3

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 20, 1982 and March 21, 1981 (11th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	75	15	140	7	194,130	204,352	435	405	41	193	2	29
NEW ENGLAND	-	-	7	3	4,491	5,115	13	19	2	10	-	1
Maine	-	-	-	-	216	253	4	3	-	1	-	-
N.H.	-	-	-	-	147	191	2	4	-	-	-	-
Vt.	-	-	-	-	98	81	-	1	-	-	-	-
Mass.	-	-	2	-	1,995	2,392	2	1	1	7	-	-
R.I.	-	-	-	-	345	241	1	1	-	-	-	-
Conn.	-	-	5	3	1,690	2,257	4	9	1	2	-	1
MID. ATLANTIC	3	-	19	1	23,948	23,498	68	67	2	21	-	1
Upstate N.Y.	1	-	9	-	3,808	3,632	16	15	-	7	-	-
N.Y. City	-	-	4	-	10,523	9,225	34	31	-	7	-	-
N.J.	1	-	3	-	4,106	4,981	18	21	2	7	-	-
Pa.	1	-	3	1	5,511	5,660	U	U	U	U	-	1
E.N. CENTRAL	3	-	29	1	24,089	33,107	42	30	4	11	1	-
Ohio	1	-	8	-	8,341	11,753	21	15	-	5	-	-
Ind.	-	-	10	1	3,163	2,691	3	7	3	5	1	-
Ill.	-	-	-	-	3,312	8,950	7	5	1	1	-	-
Mich.	2	-	9	-	6,712	6,945	9	2	-	-	-	-
Wis.	-	-	2	-	2,561	2,768	2	1	-	-	-	-
W.N. CENTRAL	3	2	8	-	9,042	9,586	16	9	2	3	-	-
Minn.	2	-	-	-	1,303	1,599	7	3	1	-	-	-
Iowa	-	1	3	-	1,048	973	1	1	-	1	-	-
Mo.	1	1	3	-	4,048	4,226	6	4	1	1	-	-
N. Dak.	-	-	-	-	113	121	-	-	-	-	-	-
S. Dak.	-	-	-	-	269	262	1	-	-	-	-	-
Nebr.	-	-	1	-	571	723	1	1	-	1	-	-
Kans.	-	-	1	-	1,690	1,682	-	-	-	-	-	-
S. ATLANTIC	18	5	18	1	50,319	50,783	41	99	8	24	-	-
Del.	-	-	-	-	778	831	-	1	-	-	-	-
Md.	3	-	9	-	6,741	5,392	1	16	1	2	-	-
D.C.	-	-	-	-	2,514	3,366	-	2	-	1	-	-
Va.	3	3	5	-	4,306	4,787	7	17	-	3	-	-
W. Va.	-	-	-	-	597	714	3	2	2	-	-	-
N.C.	1	-	1	-	8,354	8,337	4	6	-	-	-	-
S.C.	-	1	-	-	4,521	4,583	2	6	-	4	-	-
Ga.	2	-	-	-	8,331	9,760	8	31	2	3	-	-
Fla.	9	1	3	1	14,177	13,033	16	18	3	11	-	-
E.S. CENTRAL	13	2	8	-	16,287	16,834	20	22	2	-	-	-
Ky.	-	-	-	-	2,230	2,222	11	8	-	-	-	-
Tenn.	3	1	7	-	6,167	6,232	4	6	1	-	-	-
Ala.	9	1	1	-	4,847	5,458	2	4	1	-	-	-
Miss.	1	-	-	-	3,043	2,922	3	4	-	-	-	-
W.S. CENTRAL	9	3	11	-	28,019	28,644	90	33	3	74	1	-
Ark.	-	2	-	-	2,320	1,873	-	2	1	1	1	-
La.	1	-	1	-	4,877	4,375	14	2	1	6	-	-
Okla.	-	1	5	-	2,863	2,802	9	7	1	6	-	-
Tex.	8	-	5	-	17,959	19,594	67	22	-	61	-	-
MOUNTAIN	3	-	6	1	7,318	8,245	41	18	5	8	-	-
Mont.	-	-	-	-	318	308	-	-	-	-	-	-
Idaho	-	-	-	-	283	315	4	-	-	-	-	-
Wyo.	-	-	-	-	212	179	1	-	-	-	-	-
Colo.	1	-	1	1	1,952	2,166	14	8	-	-	-	-
N. Mex.	2	-	-	-	899	944	14	-	-	-	-	-
Ariz.	-	-	2	-	2,009	2,677	5	7	5	4	-	-
Utah	-	-	-	-	277	390	3	3	-	4	-	-
Nev.	-	-	3	-	1,368	1,266	-	-	-	-	-	-
PACIFIC	23	3	34	-	30,617	28,540	104	108	13	42	-	27
Wash.	3	-	2	-	2,571	2,666	22	13	3	2	-	2
Oreg.	-	-	-	-	1,733	2,212	9	7	-	2	-	-
Calif.	13	3	30	-	25,005	22,235	73	85	10	38	-	18
Alaska	1	-	2	-	776	784	-	-	-	-	-	-
Hawaii	6	-	-	-	532	643	-	3	-	-	-	7
Guam	U	-	-	-	5	37	U	U	U	U	U	-
P.R.	-	-	1	-	669	715	3	9	-	2	-	-
V.I.	-	-	-	-	51	7	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	36	108	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 20, 1982 and March 21, 1981 (11th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	16	144	37	166	539	85	698	196	1,221	20	56	653	524
NEW ENGLAND	-	10	-	4	24	8	34	8	72	4	-	11	55
Maine	-	-	-	-	1	-	2	2	20	-	-	-	31
N.H.	-	1	-	-	3	-	7	-	9	-	-	9	18
Vt.	-	-	-	2	1	2	3	1	4	-	-	-	-
Mass.	-	6	-	-	15	4	6	4	25	2	-	2	3
R.I.	-	1	-	-	-	1	4	-	7	2	-	-	-
Conn.	-	2	-	2	4	1	12	1	8	-	-	-	3
MID. ATLANTIC	-	11	3	27	180	11	104	11	80	1	5	28	61
Upstate N.Y.	-	2	1	14	137	-	28	2	20	1	2	17	27
N.Y. City	-	4	2	11	13	1	18	2	14	-	2	10	11
N.J.	-	3	-	-	12	3	27	1	17	-	1	1	21
Pa.	-	2	-	2	18	7	31	6	29	-	-	-	2
E.N. CENTRAL	-	11	1	10	37	11	73	137	649	4	8	53	104
Ohio	-	1	-	-	13	5	27	109	417	3	-	-	-
Ind.	-	1	-	1	3	1	6	-	17	1	3	8	35
Ill.	-	-	-	2	5	1	14	8	32	-	2	13	25
Mich.	-	8	1	7	16	-	21	16	117	-	2	17	15
Wis.	-	1	-	-	-	4	5	4	60	-	1	15	29
W.N. CENTRAL	-	4	-	-	4	3	28	10	51	-	1	14	31
Minn.	-	-	-	-	1	1	8	-	3	-	-	1	6
Iowa	-	1	-	-	1	-	3	2	14	-	-	-	-
Mo.	-	1	-	-	-	1	10	-	9	-	1	9	-
N. Dak.	-	-	-	-	-	-	3	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	1	-
Nebr.	-	1	-	-	1	-	1	-	-	-	-	-	-
Kans.	-	1	-	-	1	1	3	8	25	-	-	3	25
S. ATLANTIC	3	26	1	16	155	18	154	10	113	3	1	18	49
Del.	-	-	-	-	-	-	-	-	2	-	-	-	-
Md.	-	5	-	1	1	-	6	-	7	-	-	4	-
D.C.	-	3	-	1	1	-	-	-	-	-	-	-	-
Va.	2	10	-	9	3	1	12	1	15	2	-	8	1
W. Va.	-	-	-	1	6	1	5	5	57	-	-	1	12
N.C.	-	-	-	-	-	1	26	-	4	-	-	-	2
S.C.	-	2	-	-	-	2	19	2	5	-	-	1	4
Ga.	-	2	-	-	57	6	45	-	2	1	-	1	14
Fla.	1	4	1	4	87	7	41	2	21	-	1	3	16
E.S. CENTRAL	-	-	-	4	-	3	45	1	17	1	-	8	12
Ky.	-	-	-	1	-	-	2	-	7	-	-	8	8
Tenn.	-	-	-	3	-	3	23	1	6	1	-	-	4
Ala.	-	-	-	-	-	-	19	-	2	-	-	-	-
Miss.	-	-	-	-	-	-	1	-	2	-	-	-	-
W.S. CENTRAL	-	4	5	21	23	15	98	3	50	2	4	37	32
Ark.	-	-	-	-	-	-	8	-	3	-	-	-	-
La.	-	-	-	-	-	6	12	-	-	-	-	-	4
Okla.	-	-	-	-	3	2	8	-	-	1	-	1	-
Tex.	-	4	5	21	20	7	70	3	47	1	4	36	28
MOUNTAIN	-	3	-	-	8	4	44	3	26	-	1	11	21
Mont.	-	-	-	-	-	-	4	-	2	-	-	-	1
Idaho	-	-	-	-	-	-	3	-	2	-	-	-	1
Wyo.	-	-	-	-	-	2	4	-	1	-	1	4	1
Colo.	-	2	-	-	-	2	18	2	5	-	-	1	14
N. Mex.	-	-	-	-	-	-	7	-	-	-	-	1	-
Ariz.	-	1	-	-	1	-	4	-	8	-	-	1	1
Utah	-	-	-	-	-	-	1	1	6	-	-	3	2
Nev.	-	-	-	-	7	-	3	-	2	-	-	1	1
PACIFIC	13	75	27	84	108	12	118	13	163	5	36	473	159
Wash.	1	6	-	14	1	1	12	5	28	1	1	14	29
Oreg.	-	2	-	-	-	2	23	-	-	-	-	2	20
Calif.	12	66	27	69	107	9	77	8	131	4	35	455	110
Alaska	-	-	-	-	-	-	4	-	3	-	-	1	-
Hawaii	-	1	-	1	-	-	2	-	1	-	-	1	-
Guam	U	-	U	-	3	U	-	U	1	U	U	1	-
P.R.	1	2	3	32	54	-	2	2	12	-	-	2	-
V.I.	-	-	-	-	3	-	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 20, 1982 and March 21, 1981 (11th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	6,972	6,468	456	5,061	16	8	77	1	17	960
NEW ENGLAND	135	151	11	136	-	2	9	-	-	5
Maine	-	1	2	10	-	-	-	-	-	5
N.H.	-	7	-	6	-	-	-	-	-	-
Vt.	-	3	-	5	-	-	2	-	-	-
Mass.	98	87	5	85	-	2	6	-	-	-
R.I.	8	10	-	16	-	-	-	-	-	-
Conn.	29	43	4	14	-	-	1	-	-	-
MID. ATLANTIC	951	987	108	856	1	-	5	-	-	10
Upstate N.Y.	82	88	18	153	1	-	1	-	-	6
N.Y. City	606	618	38	313	-	-	4	-	-	-
N.J.	107	116	26	166	-	-	-	-	-	1
Pa.	156	165	26	224	-	-	-	-	-	3
E.N. CENTRAL	254	431	45	787	-	-	5	-	-	103
Ohio	78	69	6	143	-	-	2	-	-	14
Ind.	46	27	1	106	-	-	-	-	-	14
Ill.	41	236	31	311	-	-	1	-	-	33
Mich.	63	76	-	178	-	-	2	-	-	-
Wis.	26	23	7	49	-	-	-	-	-	42
W.N. CENTRAL	134	120	13	144	5	1	3	-	1	256
Minn.	23	41	6	29	-	-	-	-	-	55
Iowa	3	5	-	22	-	-	1	-	-	84
Mo.	82	63	2	55	4	-	1	-	1	28
N. Dak.	3	1	-	2	-	-	-	-	-	32
S. Dak.	-	-	-	3	-	-	-	-	-	12
Nebr.	3	3	1	5	-	-	-	-	-	22
Kans.	20	7	4	28	1	1	1	-	-	23
S. ATLANTIC	1,956	1,656	103	1,041	5	2	11	1	11	161
Del.	3	3	2	11	-	-	-	-	-	-
Md.	116	126	8	138	1	-	3	-	7	9
D.C.	129	152	1	39	-	-	-	-	-	-
Va.	138	156	8	94	1	-	2	-	-	83
W. Va.	6	3	6	28	-	-	2	-	-	7
N.C.	165	115	18	171	-	-	-	-	3	-
S.C.	102	117	16	95	3	2	2	1	1	11
Ga.	424	429	20	171	-	-	-	-	-	42
Fla.	873	555	24	294	-	-	2	-	-	9
E.S. CENTRAL	545	439	62	445	1	-	7	-	3	105
Ky.	29	19	9	111	-	-	-	-	-	18
Tenn.	140	169	24	161	1	-	2	-	-	69
Ala.	185	126	19	140	-	-	5	-	3	18
Miss.	191	125	10	33	-	-	-	-	-	-
W.S. CENTRAL	1,812	1,548	42	480	2	-	3	-	1	162
Ark.	46	28	9	47	1	-	-	-	-	23
La.	394	316	1	90	-	-	-	-	-	4
Okla.	32	35	9	87	1	-	2	-	-	43
Tex.	1,340	1,169	23	256	-	-	1	-	1	92
MOUNTAIN	207	160	11	131	1	1	4	-	-	13
Mont.	1	7	-	11	-	-	-	-	-	7
Idaho	14	2	-	6	-	-	-	-	-	-
Wyo.	9	2	-	3	-	-	-	-	-	1
Colo.	68	51	2	17	-	-	-	-	-	-
N. Mex.	34	37	2	23	-	-	-	-	-	2
Ariz.	41	33	6	50	-	1	3	-	-	3
Utah	5	3	1	6	1	-	1	-	-	-
Nev.	35	25	-	15	-	-	-	-	-	-
PACIFIC	978	976	61	1,021	1	2	30	-	1	145
Wash.	24	35	3	61	1	-	-	-	-	-
Oreg.	34	21	2	39	-	-	1	-	-	-
Calif.	890	894	47	852	-	2	28	-	1	107
Alaska	6	4	-	13	-	-	-	-	-	38
Hawaii	24	22	9	56	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	138	152	-	30	-	-	-	-	-	8
V.I.	-	-	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 20, 1982 (11th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	667	477	124	29	16	21	44
Boston, Mass.	192	119	44	13	6	10	23
Bridgeport, Conn.	56	42	11	2	1	-	2
Cambridge, Mass.	30	24	5	1	-	-	1
Fall River, Mass.	29	25	3	-	-	1	-
Hartford, Conn.	53	35	12	4	-	2	2
Lowell, Mass.	26	21	4	1	-	-	2
Lynn, Mass.	17	12	3	-	2	-	-
New Bedford, Mass.	25	22	3	-	-	-	-
New Haven, Conn.	52	41	6	1	2	2	-
Providence, R.I.	54	39	13	-	1	1	5
Somerville, Mass.	2	2	-	-	-	-	-
Springfield, Mass.	34	23	6	1	1	3	3
Waterbury, Conn.	35	26	6	3	-	-	4
Worcester, Mass.	62	46	8	3	3	2	2
MID. ATLANTIC	2,506	1,763	571	137	65	70	115
Albany, N.Y.	53	33	12	2	4	2	1
Allentown, Pa.	17	14	3	-	-	-	3
Buffalo, N.Y.	150	93	45	5	5	2	7
Camden, N.J.	32	21	6	4	-	1	1
Elizabeth, N.J.	31	25	5	-	1	-	2
Erie, Pa.†	31	20	7	-	1	3	4
Jersey City, N.J.	41	33	6	-	1	1	-
N.Y. City, N.Y.	1,424	947	305	95	41	36	52
Newark, N.J.	53	30	15	3	1	4	4
Paterson, N.J.	38	24	12	1	1	-	2
Philadelphia, Pa.†	299	196	77	8	8	10	15
Pittsburgh, Pa.†	58	40	13	5	-	-	1
Reading, Pa.	42	35	6	1	-	-	4
Rochester, N.Y.	111	80	19	6	1	5	6
Schenectady, N.Y.	27	23	3	1	-	-	1
Scranton, Pa.†	21	18	3	-	-	-	1
Syracuse, N.Y.	73	57	12	1	-	3	3
Trenton, N.J.	51	29	15	4	1	2	1
Utica, N.Y.	25	21	4	-	-	-	3
Yonkers, N.Y.	29	24	3	1	-	1	4
E.N. CENTRAL	2,291	1,441	545	124	77	104	59
Akron, Ohio	119	86	25	4	1	3	-
Canton, Ohio	43	30	9	2	1	1	-
Chicago, Ill.	531	310	136	40	20	25	5
Cincinnati, Ohio	145	94	31	4	6	10	9
Cleveland, Ohio	158	98	38	8	5	9	5
Columbus, Ohio	134	81	32	7	4	10	5
Dayton, Ohio	94	50	31	6	4	3	1
Detroit, Mich.	281	160	78	23	10	10	6
Evansville, Ind.	50	34	10	2	1	3	-
Fort Wayne, Ind.	44	30	10	-	1	3	1
Gary, Ind.	14	7	5	1	1	-	-
Grand Rapids, Mich.	67	44	13	2	3	5	3
Indianapolis, Ind.	153	99	38	10	3	3	3
Madison, Wis.	30	16	8	2	1	3	2
Milwaukee, Wis.	132	90	26	2	5	9	-
Peoria, Ill.	49	36	6	2	2	3	7
Rockford, Ill.	47	32	6	1	4	4	3
South Bend, Ind.	53	37	13	2	1	-	5
Toledo, Ohio	96	68	22	3	3	-	3
Youngstown, Ohio	51	39	8	3	1	-	1
W.N. CENTRAL	746	505	164	31	21	25	34
Des Moines, Iowa	70	50	16	2	1	1	1
Duluth, Minn.	34	20	8	4	1	1	3
Kansas City, Kans.	40	25	14	-	1	-	-
Kansas City, Mo.	122	80	27	4	4	7	3
Lincoln, Nebr.	36	26	7	-	3	-	2
Minneapolis, Minn.	82	57	14	2	3	6	5
Omaha, Nebr.	97	65	20	4	2	6	1
St. Louis, Mo.	112	76	21	9	3	3	10
St. Paul, Minn.	78	53	19	3	2	1	3
Wichita, Kans.	75	53	18	3	1	-	6
S. ATLANTIC	1,203	719	329	75	29	47	43
Atlanta, Ga.	170	96	50	11	5	8	3
Baltimore, Md.	244	144	76	12	6	6	3
Charlotte, N.C.	76	43	21	5	3	4	4
Jacksonville, Fla.	103	69	20	7	3	4	3
Miami, Fla.	74	36	19	9	5	5	2
Norfolk, Va.	48	28	13	1	-	6	2
Richmond, Va.	71	42	19	8	1	1	6
Savannah, Ga.	48	31	15	-	1	1	5
St. Petersburg, Fla.	102	80	20	2	-	-	5
Tampa, Fla.	75	58	9	4	1	3	2
Washington, D.C.	140	63	50	12	2	9	3
Wilmington, Del.	52	29	17	4	2	-	5
E.S. CENTRAL	676	412	173	32	28	31	40
Birmingham, Ala.	109	69	21	6	3	10	4
Chattanooga, Tenn.	62	42	14	2	2	2	11
Knoxville, Tenn.	36	27	9	-	-	-	-
Louisville, Ky.	127	67	39	6	7	8	9
Memphis, Tenn.	170	100	41	10	10	9	9
Mobile, Ala.	35	25	7	2	-	1	2
Montgomery, Ala.	49	34	15	-	-	-	1
Nashville, Tenn.	88	48	27	6	6	1	4
W.S. CENTRAL	1,460	850	380	96	71	63	49
Austin, Tex.	64	31	20	4	7	2	2
Baton Rouge, La.	29	19	7	1	-	2	-
Corpus Christi, Tex.	33	26	5	-	-	2	3
Dallas, Tex.	174	102	47	9	10	6	2
El Paso, Tex.	51	35	9	3	3	1	7
Fort Worth, Tex.	98	63	19	6	4	6	9
Houston, Tex.	468	230	136	51	29	22	5
Little Rock, Ark.	72	52	17	2	-	1	5
New Orleans, La.	128	75	34	6	1	12	-
San Antonio, Tex.	162	98	42	9	8	5	8
Shreveport, La.	64	47	11	3	2	1	-
Tulsa, Okla.	117	72	33	2	7	3	8
MOUNTAIN	734	476	172	37	25	24	41
Albuquerque, N.Mex.	83	51	16	9	5	2	5
Colo. Springs, Colo.	39	28	8	1	1	1	8
Denver, Colo.	117	78	24	7	3	5	7
Las Vegas, Nev.	105	61	34	4	3	3	3
Ogden, Utah	33	18	11	1	1	2	3
Phoenix, Ariz.	175	113	46	6	3	7	2
Pueblo, Colo.	23	20	3	-	-	-	5
Salt Lake City, Utah	62	40	9	4	7	2	2
Tucson, Ariz.	97	67	21	5	2	2	6
PACIFIC	1,872	1,247	406	117	44	56	83
Berkeley, Calif.	26	18	5	1	-	2	2
Fresno, Calif.	60	39	10	7	3	1	1
Glendale, Calif.	20	19	1	-	-	-	-
Honolulu, Hawaii	78	47	22	6	1	2	5
Long Beach, Calif.	98	65	26	6	-	1	4
Los Angeles, Calif.	592	391	130	41	13	15	27
Oakland, Calif.	78	47	19	9	1	2	3
Pasadena, Calif.	34	27	2	2	1	2	5
Portland, Oreg.	96	70	12	7	4	3	4
Sacramento, Calif.	86	54	23	5	2	2	5
San Diego, Calif.	136	91	26	11	4	4	7
San Francisco, Calif.	171	111	40	8	8	4	6
San Jose, Calif.	129	85	32	6	2	4	7
Seattle, Wash.	167	119	35	3	1	9	3
Spokane, Wash.	50	34	8	2	2	4	-
Tacoma, Wash.	51	30	15	3	2	1	4
TOTAL	12,255††	7,890	2,864	678	376	441	508

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

Influenza — Continued

cases occurring on March 10. Six influenza B viruses have been isolated thus far from specimens collected on March 12 from 11 residents and 1 staff member. During the period of the outbreak, 6 patients with influenza-like illness died. Investigations of vaccine efficacy in this nursing home and in a nursing home in Missouri (*2*) are in progress.

Reported by Y Wong, PhD, WJ Hausler, PhD, L Wintermeyer, MD, State Epidemiologist, Iowa State Dept Health; R Siem, PhD, AD Dean, MD, State Epidemiologist, Minnesota State Dept of Health; J Blosser, P Stoesz, MD, State Epidemiologist, Nebraska State Dept of Health; J Sarandria, Allegheny County Health Dept Laboratory, Pittsburgh, EJ Witte, DVM, State Epidemiologist, Pennsylvania State Dept of Health; S Mills, J Allard, PhD, State Epidemiologist, Washington State Dept of Social and Health Svcs; H Krebs, RN, Cobb County Health Dept, M Johnson, RN, T Munro, MS, J Buehler, MD, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human Resources; R Worrell, RN, P Noland, MD, Pima County Health Dept, L Minnich, MS, G Ray, MD, University Hospital, Tucson, J Sacks, MD, Acting State Epidemiologist, Arizona Dept of Health Svcs; FG Hayden, MD, University of Virginia Medical Center, GB Miller, Jr, MD, State Epidemiologist, Virginia State Dept of Health; Influenza Br, Center for Infectious Diseases, CDC.

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1. CDC. Influenza update—United States. MMWR 1982;31:41.
2. CDC. Influenza update—United States. MMWR 1982;31:131.

International Notes

Quarantine Measures

The following changes should be made in the "Supplement-Health Information for International Travel," MMWR 1981:30. *Situation as of January 1, 1982.*

ANTIGUA

Change to ANTIGUA AND BARBUDA on pages 10 and 17, Insert Barbuda, page 17, on page 99.

BARBADOS

Yellow Fever - Change code to III > 1 yr. Insert: A certificate is required ALSO from travelers arriving from:

Africa: Angola; Benin; Burundi; Cameroon, United Republic of; Central African Republic; Chad; Congo; Djibouti; Equatorial Guinea; Ethiopia; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Ivory Coast; Kenya; Liberia; Mali; Niger; Nigeria; Rwanda; Sao Tome and Principe; Senegal; Sierra Leone; Somalia; Sudan; Tanzania, United Republic of; Togo; Uganda; Upper Volta; Zaire.

Americas: Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Surinam, Venezuela.

ALSO change code to III* on page 10.

BRAZIL

Yellow Fever - After code II delete > 1 yr. Insert >6 mo. Insert: Brazil recommends vaccination for travel to rural areas in Acre, Amazonas, Goias, Maranhao, Mato Grosso, Mato Grosso do Sul, and Para States, and Territories of Amapa, Rondonia, and Roraima. ALSO insert * after code on page 10.
Poliomyelitis -the dosage of vaccine must be clearly indicated on the certificate.

BURMA

Yellow Fever - Change code to III. ALSO change code to III on page 11.

CHAD

Smallpox - Insert: Instead of vaccination, travelers should ask their physician for a written statement that vaccination is contraindicated for health reasons. ALSO insert * after code on page 11.

Quarantine Measures – Continued

DEMOCRATIC KAMPUCHEA

Smallpox - Insert: The Government of Democratic Kampuchea has advised that a certificate is no longer required. Local authorities, however, may require a certificate. Insert: Instead of vaccination, travelers should ask their physician for a written statement that vaccination is contraindicated for health reasons. ALSO insert * after code on page 11.

EGYPT

Yellow Fever - Caribbean - after Trinidad insert: and Tobago.

ETHIOPIA

Yellow Fever - After code insert > 1 yr.

FIJI

Cholera - Delete all information. ALSO delete code on page 12.

GUATEMALA

Delete: No vaccinations are required. Insert: Yellow Fever - III > 1 yr. ALSO insert code III on page 12.

INDIA

Yellow Fever - Americas: Delete Canal Zone.

IRAN

Cholera - Delete all information. ALSO delete all information on page 12.

Yellow Fever - Insert: A certificate is required ALSO from travelers arriving from countries in the endemic zones (see pp. 67-68). ALSO insert * after code on page 12.

JAMAICA

Yellow Fever - Change code to III > 1 yr. ALSO change code to III on page 13.

MALAWI

Cholera - Delete all information. ALSO delete code on page 13.

MALDIVES

Cholera - Change code to III. ALSO change code to III on page 13.

INSERT: **NIUE**

Yellow Fever - II > 1 yr. ALSO insert Niue and code II under yellow fever on page 14. Under areas with risk of malaria insert: None. On page 14 under malaria risk insert: None. ALSO insert "NIUE" on page 46, and insert "NIUE, page 46" on page 100.

PAKISTAN

Yellow Fever - Change code to III > 6 mo. Delete: (irrespective of age). Insert: A certificate is not required of infants < 6 months of age if the mother's certificate shows she was vaccinated prior to the birth of the child. ALSO change code to III on page 14.

PANAMA

Insert: No vaccinations are required.

PAPUA NEW GUINEA

Yellow Fever - Insert > 1 yr. after code.

PARAGUAY

Cholera - Delete all information. ALSO delete code on page 14.

SAINT VINCENT

Change to **SAINT VINCENT AND THE GRENADINES.** ALSO change to **SAINT VINCENT AND THE GRENADINES** on page 15. ALSO insert "Grenadines" on page 49, and insert "Grenadines, page 49" on page 99.

THAILAND

Yellow Fever - Delete note. ALSO delete * on page 15.

UNITED ARAB EMIRATES

Cholera - Delete all information. ALSO delete code on page 16.

Quarantine Measures — Continued

VIET NAM

Cholera - Delete all information. ALSO delete code on page 16.

Epidemiologic Notes and Reports

Measles, United States — Weeks 5-8, 1982

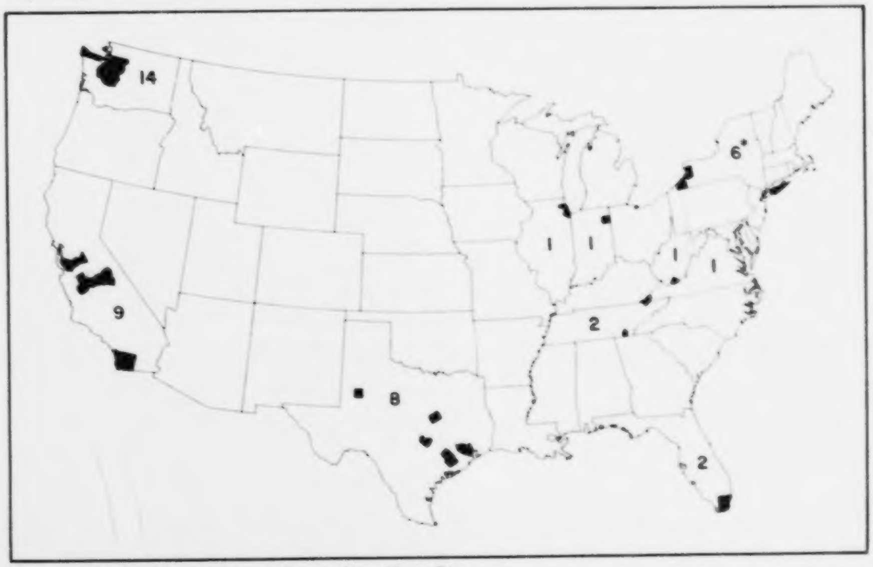
In the 4-week period January 31-February 27, 1982 (reporting weeks 5-8), 45 cases of measles were reported to CDC—an average of fewer than 12 cases per week. This total is 76.7% below the 193 cases reported in the same period in 1981, the previous record low. Only 26 (0.8%) of the nation's 3,144 counties reported measles to CDC in this period (Figure 4).

Of the 45 measles cases, 2 were imported, 1 each from El Salvador and England. Both imported cases were reported from California. No secondary cases related to these importations have been reported.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: The 45 measles cases reported in this 4-week period represent a > 99.9% reduction from the 48,510 cases reported in the same period in 1962, the year preceding measles-vaccine licensure. During this period in 1982, 99.2% of the nation's counties reported no measles, suggesting that measles transmission has been interrupted in these areas.

FIGURE 4. States and counties reporting measles, weeks 5-8, January 31-February 27, 1982



*5 from Upstate New York and 1 from New York City.

The Morbidity and Mortality Weekly Report, circulation 106,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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31/12

CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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International Notes

Yaws and Yellow Fever Project — Ghana

In January 1981, the government of Ghana and 4 major donors (USAID, WHO, UNICEF, EEC*) began a project to interrupt the precipitous increase in the prevalence of yaws and to contain the spread of yellow fever in that country. The project is intended to support the Ghanaian government's overall goal of providing the most effective health care at the most reasonable cost to the greatest number of people.

By the end of 1981, participants in the project had examined 803,437 Ghanaians (total population about 11 million) for yaws and had treated 544,469 of these persons (yaws patients and their contacts), each with a single injection of long-acting penicillin. In the project, 292,037 children were vaccinated against yellow fever, 55,791 against measles, 120,793 against tuberculosis, and 125,715 women of childbearing age were vaccinated against tetanus. In the areas surveyed, coverage of the target population with penicillin treatment and yellow fever vaccine slightly exceeded the project objective of 80%. The anti-yaws strategy included the use of mobile teams and the assurance that fixed health facilities received regular supplies of penicillin for treating patients and their contacts. However, mainly because of shortfalls in gasoline supplies, the mobile teams were only able to carry out their field activities on about 43% of the intended days of operation.

In the surveyed villages of heavily affected Ashanti, Eastern and Central Regions, the prevalence of persons with active yaws was reduced by the end of 1981 to 53/100,000 population from the 1980 level of 703/100,000.

Reported by Dr EG Beausoleil, Director of Medical Svcs, Dr Yaw Aboagye-Attah, Deputy Director of Medical Svcs (PH), Dr VK Agadzi, Chief, Epidemiology Div, FK Kofi, Chief Technical Officer, Ghanaian Ministry of Health; International Health Program Office, CDC.

Editorial Note: This timely project demonstrates the feasibility of halting the resurgence of yaws in Ghana, where the numbers of cases of that disease reported each year increased almost 10-fold between 1969 and 1979 (*1,2*). Moreover, this was accomplished while persons in the same villages were being vaccinated against other important infectious agents. In recent years several other countries, particularly in West Africa, reported large numbers of cases of yaws and/or endemic, non-venereal syphilis (*1*). It is hoped that the impact of this project and the methods used in it will stimulate other countries with similar public health problems to reconsider what might be accomplished in their own epidemiologic situations. Two of Ghana's neighbors, Togo and Ivory Coast, have already decided to intensify their efforts to combat yaws. The emergence of chloroquine-resistant malaria, isoniazid-resistant tuberculosis, and now dapsone-resistant leprosy (*3*) illustrate the risks of not acting promptly

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*USAID (United States Agency for International Development), WHO (World Health Organization), UNICEF (United Nations Children's Emergency Fund), EEC (European Economic Community).

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HE 20.7009:

Yaws and Yellow Fever — Continued

and vigorously to make maximal use of inexpensive, effective, and simple chemotherapy against an endemic disease.

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3. CDC. Increase in prevalence of leprosy caused by dapsone-resistant *Mycobacterium leprae*. MM[illegible]R 1982;30:637-8.

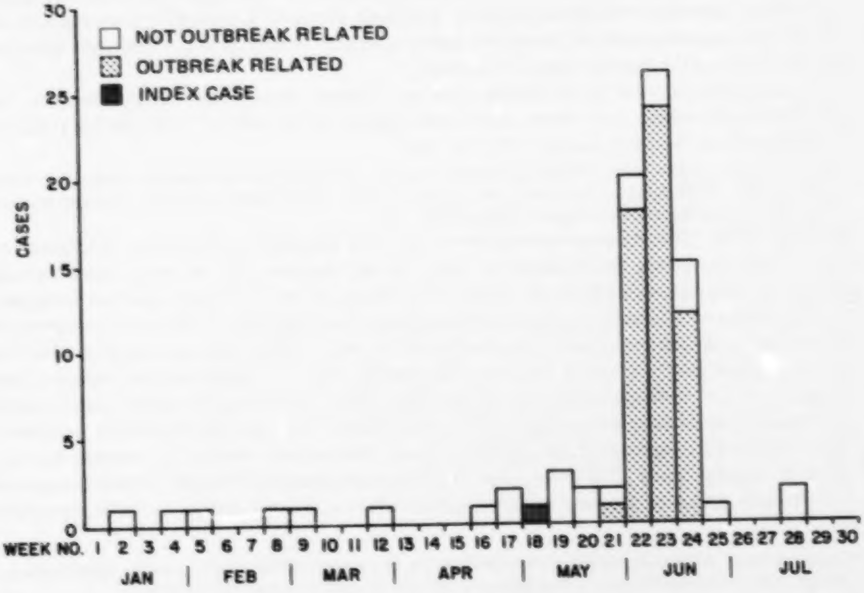
Epidemiologic Notes and Reports

Outbreak of Food-borne Hepatitis A — New Jersey

An increase in the number of hepatitis cases in Monmouth County, New Jersey, was reported to the New Jersey Department of Health on June 15, 1981. Investigation by state and local area health departments revealed that 56 cases of hepatitis had occurred during the first 3 weeks of June in an area of Monmouth County where the usual average is 3-4 cases/month. Patients for whom appropriate laboratory tests had been done were confirmed to have hepatitis A.

Detailed food histories revealed that, within the appropriate incubation period for hepatitis A, 55 of the 56 patients had eaten at a Mexican style restaurant (Figure 1). Interviews of a control group matched for age, sex, and neighborhood of residence, showed that 10% of the

FIGURE 1. Hepatitis A cases, by week of onset, Monmouth County, New Jersey, 1981



Food-borne Hepatitis – Continued

controls ate food from this restaurant over a time period comparable with that for 98% of the patients. The restaurant agreed to close voluntarily pending further investigation.

Of the patients whose illness was related to the Mexican restaurant, 71% were male, 68% were between the ages of 15 and 29 years, and 4 were children under 15 years. A case-control study using 46 non-ill patrons revealed that patients were more likely to have eaten nachos, beans, and jalapeno peppers. Both beans and jalapeno peppers were used in preparing nachos.

Ten individuals including the 2 owners worked in the restaurant; all handled food at one time or another. Interviews on June 18 revealed that 1 employee who frequently ate food from the restaurant was ill with hepatitis at the time of the interview. Another employee had symptoms compatible with hepatitis on May 9. He had worked all day May 9, but felt too ill to work thereafter; the diagnosis of hepatitis A was confirmed for him on May 16. This employee prepared food—including grating cheese, shredding lettuce, and occasionally cutting meat—measured portions of meat, beans, jalapeno peppers, onions, cheeses, and lettuce into shells, and served the customers.

Because a food handler was recently ill with hepatitis and because the restaurant was implicated in the spread of hepatitis, immune globulin was offered to all individuals who ate in the restaurant from June 5 until it closed. A total of 1,430 people were immunized at a 2-day clinic held June 19 and 20.

Reported by R Hary, Matawan Borough, S McKee, Middletown Township, S Scapricio, Hazlet Township, L. Jargowski, Monmouth County Health Dept, F Richart, Red Bank, R Altman, MD, P Marzinsky, B Mojica, MD, WE Parkin, DVM, State Epidemiologist, New Jersey State Dept of Health; Field Svcs Br, Hepatitis Laboratory Div, Center for Infectious Diseases, Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: Hepatitis A virus (HAV) can be transmitted by food contaminated with feces from an infected food handler. If acute hepatitis A has been confirmed in a food handler by testing for IgM-specific HAV antibody, immunoglobulin prophylaxis (IG, gamma globulin) may be considered for patrons, depending on the probability of transmission of infectious virus and the probability of successful intervention in transmission by using IG. However, few food handlers actually appear to transmit disease via food, and IG prophylaxis of patrons is seldom warranted. Although for the past few years approximately 1,000 food handlers with non-B hepatitis have been reported annually to CDC, an average of 4 outbreaks of food-borne hepatitis A have been reported each year.

Transmission of HAV is affected by the amount of virus excreted by the food handler, the type of food handled, and the food handler's hygiene practices. Because the amount of virus excreted peaks 7-10 days before onset of symptoms and declines rapidly thereafter (*1*), food-borne outbreaks of hepatitis commonly originate from foods prepared before the food handler has clinical symptoms (*2,3*). As in this outbreak, most reported outbreaks have been traced to symptomatic rather than asymptomatic excreters. Uncooked foods have most frequently been associated with food-borne hepatitis because normal cooking temperatures inactivate HAV (*4*). However, cooked foods that were handled after cooling and foods that were contaminated and then cooked with insufficiently high internal temperature to inactivate HAV have also been implicated (*2,5*). Although poor hygiene practices among food handlers increase the chance of transmission of virus, outbreaks have occurred even when food handlers' personal hygiene practices were described as "acceptable" and "generally good" (*3*). Hygiene practices should be assessed by interviewing the ill food handler, coworkers, and employer. If deficiencies occurred and the ill food handler did not wear gloves, prophylaxis may be considered for patrons who ate implicated food items during the appropriate time period. Successful intervention in disease transmission depends on identifying persons at risk

Food-borne Hepatitis – Continued

and administering IG within 2 weeks after exposure (*6*).

Other employees who have been regularly exposed to the index case are at risk of acquiring infection. If they do become infected, they may serve as additional sources of infection for future food consumers. These employees should be extremely conscientious in their hygiene practices, and those who handle high-risk foods should be given IG. Screening of coworkers for elevated liver enzymes or antibodies to HAV does not appear justified because the enzymes are not specific for hepatitis A, and both enzymes and antibodies appear after most virus excretion has occurred.

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TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE			12th WEEK ENDING			CUMULATIVE, FIRST 12 WEEKS		
			March 27 1982	March 28 1981	MEDIAN 1977-1981	March 27 1982	March 28 1981	MEDIAN 1977-1981
Aseptic meningitis			67	94	53	877	791	582
Brucellosis			5	3	4	20	16	39
Encephalitis:	Primary (arthropod-borne & unspec.)		20	21	12	160	175	138
	Post-infectious		2	–	3	9	17	36
Gonorrhea:	Civilian		16,384	17,103	16,914	211,561	221,455	218,491
	Military		389	730	471	6,114	6,746	6,428
Hepatitis:	Type A		369	582	582	5,107	5,780	6,332
	Type B		400	439	318	4,296	4,260	3,571
	Non A, Non B		31	N	N	388	N	N
	Unspecified		169	221	221	2,106	2,445	2,372
Legionellosis			7	N	N	57	N	N
Leprosy			2	2	2	31	48	34
Malaria			13	16	9	156	277	111
Measles (rubeola)			17	74	683	183	613	3,501
Meningococcal infections:		Total	69	88	70	767	1,207	794
		Civilian	69	88	68	763	1,205	785
		Military	–	–	2	4	2	9
Mumps			225	127	571	1,447	1,295	4,503
Pertussis			18	22	22	221	234	243
Rubella(German measles)			57	67	529	710	591	2,874
Syphilis (Primary & Secondary):		Civilian	737	591	452	7,768	7,059	5,613
		Military	1	13	5	86	96	73
Tuberculosis			422	563	565	5,462	5,553	5,904
Tularemia			1	4	2	17	24	21
Typhoid fever			7	9	9	85	100	91
Typhus fever, tick-borne (RMSF)			1	–	–	18	12	12
Rabies, animal			118	199	84	1,078	1,426	727

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982			CUM. 1982
Anthrax	–	Poliomyelitis:	Total	1
Botulism (Calif. 1)	17		Paralytic	1
Cholera	1	Psittacosis (Mass. 2; Mo. 1; Wash. 1)		17
Congenital rubella syndrome (Mich. 1)	1	Rabies, human		–
Diphtheria	–	Tetanus		9
Leptospirosis	12	Trichinosis (N.H. 1)		26
Plague	2	Typhus fever, flea-borne (endemic, murine)		3

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 27, 1982 and March 28, 1981 (12th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	67	20	160	9	211,561	221,455	369	400	31	169	7	31
NEW ENGLAND	1	–	8	3	4,825	5,597	8	22	1	14	2	1
Maine	–	–	–	–	234	280	2	–	–	–	–	–
N.H.	–	–	–	–	152	212	–	1	1	2	–	–
Vt.	–	–	–	–	104	95	1	1	–	–	–	–
Mass.	1	–	3	–	2,243	2,264	5	8	–	12	–	–
R.I.	–	–	–	–	371	262	–	2	–	–	–	–
Conn.	–	–	5	3	1,721	2,484	–	10	–	–	2	1
MID. ATLANTIC	14	–	21	1	26,031	25,314	50	69	2	20	1	2
Upstate N.Y.	4	–	10	–	4,208	3,933	5	12	–	5	–	–
N.Y. City	5	–	4	–	11,273	10,075	28	36	–	7	–	–
N.J.	5	–	4	–	4,531	5,152	17	21	2	8	1	1
Pa.	–	–	3	1	6,019	6,154	U	U	U	U	–	1
E.N. CENTRAL	3	–	36	2	27,157	36,267	54	60	3	12	2	–
Ohio	3	–	12	–	8,597	12,691	24	29	1	9	1	–
Ind.	–	–	10	2	3,758	2,910	10	7	1	2	–	–
Ill.	–	–	–	–	4,536	10,035	11	12	1	–	–	–
Mich.	–	–	12	–	7,442	7,583	8	10	–	1	1	–
Wis.	–	–	2	–	2,824	3,048	1	2	–	–	–	–
W.N. CENTRAL	5	2	11	–	9,799	10,620	10	11	1	1	1	–
Minn.	2	–	–	–	1,485	1,709	5	3	1	–	–	–
Iowa	2	1	6	–	1,104	1,067	1	3	–	–	–	–
Mo.	1	1	3	–	4,399	4,761	1	1	–	1	1	–
N. Dak.	–	–	–	–	124	136	–	–	–	–	–	–
S. Dak.	–	–	–	–	292	291	–	1	–	–	–	–
Nebr.	–	–	1	–	607	819	–	–	–	–	–	–
Kans.	–	–	1	–	1,785	1,837	3	3	–	–	–	–
S. ATLANTIC	8	6	19	1	54,935	55,431	36	79	6	19	–	1
Del.	–	–	–	–	848	885	2	–	–	3	–	–
Md.	–	–	9	–	7,372	5,832	2	11	1	–	–	–
D.C.	–	–	–	–	2,730	3,644	–	–	–	–	–	–
Va.	2	4	6	–	4,652	5,214	2	13	2	2	–	–
W. Va.	–	–	–	–	625	796	3	2	–	1	–	–
N.C.	3	–	1	–	9,057	9,150	4	4	–	1	–	–
S.C.	–	1	–	–	5,140	4,975	7	8	–	2	–	–
Ga.	–	–	–	–	8,818	10,835	6	14	–	4	–	–
Fla.	3	1	3	1	15,693	14,109	10	27	3	6	–	1
E.S. CENTRAL	6	3	10	1	17,780	18,077	19	15	1	1	–	–
Ky.	–	–	–	–	2,414	2,377	5	3	–	–	–	–
Tenn.	–	1	7	–	6,758	6,757	8	5	1	–	–	–
Ala.	4	1	2	1	5,362	5,748	2	5	–	1	–	–
Miss.	2	1	1	–	3,246	3,195	4	2	–	–	–	–
W.S. CENTRAL	6	3	12	–	30,312	30,548	104	43	2	66	–	–
Ark.	–	2	–	–	2,512	1,990	6	3	1	2	–	–
La.	4	–	1	–	5,420	4,663	22	7	1	3	–	–
Okla.	–	1	5	–	3,203	3,127	17	3	–	4	–	–
Tex.	2	–	6	–	19,177	20,768	59	30	–	57	–	–
MOUNTAIN	7	–	7	1	7,931	8,938	24	29	3	15	–	–
Mont.	–	–	–	–	338	323	2	–	–	–	–	–
Idaho	–	–	–	–	306	328	–	2	–	–	–	–
Wyo.	–	–	–	–	224	200	1	–	–	1	–	–
Colo.	–	–	1	1	2,105	2,327	8	1	–	1	–	–
N. Mex.	–	–	–	–	993	1,063	3	3	–	–	–	–
Ariz.	–	–	2	–	2,176	2,907	1	2	–	–	–	–
Utah	1	–	–	–	338	425	–	1	1	5	–	–
Nev.	6	–	4	–	1,451	1,365	9	20	2	8	–	–
PACIFIC	17	6	36	–	32,791	30,663	64	72	12	21	1	27
Wash.	2	–	3	–	2,781	2,952	4	8	3	–	1	2
Oreg.	–	–	–	–	1,876	2,397	4	3	2	2	–	–
Calif.	8	5	31	–	26,734	23,756	56	57	7	19	–	18
Alaska	–	1	2	–	827	864	–	–	–	–	–	–
Hawaii	7	–	–	–	573	694	–	4	–	–	–	7
Guam	U	–	–	–	5	37	U	U	U	U	U	–
P.R.	–	–	1	–	669	762	1	2	–	2	–	–
V.I.	U	–	–	–	51	14	U	U	U	U	U	–
Pac. Trust Terr.	U	–	–	–	36	113	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 27, 1982 and March 28, 1981 (12th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	13	156	17	183	613	69	767	225	1,447	18	57	710	591
NEW ENGLAND	1	11	-	4	25	5	39	8	79	1	2	13	55
Maine	-	-	-	-	2	-	2	-	20	-	-	-	31
N.H.	-	1	-	-	3	1	8	-	8	-	-	9	18
Vt.	-	-	-	2	1	-	3	-	4	-	-	-	-
Mass.	1	7	-	-	15	2	8	7	31	1	2	4	3
R.I.	-	1	-	-	-	1	5	-	7	-	-	-	-
Conn.	-	2	-	2	4	1	13	1	9	-	-	-	3
MID. ATLANTIC	2	13	1	28	210	9	112	5	85	4	3	31	69
Upstate N.Y.	-	2	1	15	143	2	30	1	21	1	1	18	30
N.Y. City	-	4	-	11	17	2	20	2	16	1	-	10	14
N.J.	1	4	-	-	14	2	29	1	18	1	2	3	23
Pa.	1	3	-	2	36	3	33	1	30	1	-	-	2
E.N. CENTRAL	1	12	1	11	40	6	79	181	831	3	4	57	129
Ohio	1	2	-	-	13	5	32	151	569	-	-	-	-
Ind.	-	1	-	1	3	-	6	-	17	-	-	8	46
Ill.	-	-	-	2	6	-	14	6	38	1	3	16	32
Mich.	-	8	1	8	18	-	21	19	136	-	1	18	18
Wis.	-	1	-	-	-	1	6	5	71	2	-	15	33
W.N. CENTRAL	-	4	-	-	4	5	33	6	57	1	2	16	32
Minn.	-	-	-	-	1	1	9	-	3	-	-	1	6
Iowa	-	1	-	-	1	1	4	1	15	-	-	-	-
Mo.	-	1	-	-	-	1	11	1	10	-	-	9	-
N. Dak.	-	-	-	-	-	1	4	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	1	-	-	-	-	1	-
Nebr.	-	1	-	-	1	-	1	-	-	-	-	-	1
Kans.	-	1	-	-	1	-	3	4	29	1	2	5	25
S. ATLANTIC	4	29	-	16	185	14	169	6	120	5	-	18	59
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	-	5	-	1	1	-	6	3	10	-	-	4	-
D.C.	-	3	-	1	1	1	1	-	-	-	-	-	-
Va.	3	12	-	9	3	2	15	1	16	-	-	8	1
W. Va.	-	-	-	1	7	-	5	1	58	-	-	1	14
N.C.	-	-	-	-	-	1	27	-	4	1	-	-	2
S.C.	-	2	-	-	-	2	21	-	5	1	-	1	4
Ga.	-	2	-	-	70	7	52	-	2	3	-	1	17
Fla.	1	5	-	4	103	1	42	1	22	-	-	3	21
E.S. CENTRAL	-	-	-	4	-	8	53	-	17	1	3	11	14
Ky.	-	-	-	1	-	1	3	-	7	-	3	11	9
Tenn.	-	-	-	3	-	-	23	-	6	1	-	-	5
Ala.	-	-	-	-	-	6	25	-	2	-	-	-	-
Miss.	-	-	-	-	-	1	2	-	2	-	-	-	-
W.S. CENTRAL	1	5	3	24	28	11	109	3	53	-	3	40	36
Ark.	-	-	-	-	-	-	8	-	3	-	-	-	-
La.	1	1	-	-	-	5	17	-	-	-	-	-	4
Okla.	-	-	-	-	3	1	9	-	-	-	-	1	-
Tex.	-	4	3	24	25	5	75	3	50	-	3	39	32
MOUNTAIN	-	3	-	-	8	4	48	2	28	1	3	14	23
Mont.	-	-	-	-	-	-	4	1	3	-	-	-	1
Idaho	-	-	-	-	-	1	4	-	2	1	-	-	2
Wyo.	-	-	-	-	-	-	4	1	2	-	-	4	1
Colo.	-	2	-	-	-	-	18	-	5	-	-	1	14
N. Mex.	-	-	-	-	-	-	7	-	-	-	-	1	1
Ariz.	-	1	-	-	1	1	5	-	8	-	-	1	1
Utah	-	-	-	-	-	2	3	-	6	-	2	5	2
Nev.	-	-	-	-	7	-	3	-	2	-	1	2	1
PACIFIC	4	79	12	96	113	7	125	14	177	2	37	510	174
Wash.	1	7	-	14	1	1	13	5	33	1	-	14	35
Oreg.	-	2	-	-	-	1	24	-	-	-	-	2	20
Calif.	3	69	12	81	112	4	81	8	139	1	36	491	119
Alaska	-	-	-	-	-	1	5	1	4	-	-	1	-
Hawaii	-	1	-	1	-	-	2	-	1	-	1	2	-
Guam	U	-	U	-	3	U	-	U	1	U	U	1	-
P.R.	-	2	7	39	77	1	3	-	12	-	1	3	-
V.I.	U	-	U	-	3	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 27, 1982 and March 28, 1981 (12th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	7,768	7,059	422	5,462	17	7	65	1	18	1,078
NEW ENGLAND	154	163	8	144	-	-	10	-	-	5
Maine	-	1	1	11	-	-	-	-	-	5
N.H.	-	7	-	6	-	-	-	-	-	-
Vt.	-	5	-	5	-	-	2	-	-	-
Mass.	107	95	5	90	-	-	7	-	-	-
R.I.	10	12	-	16	-	-	-	-	-	-
Conn.	37	43	2	16	-	-	1	-	-	-
MID. ATLANTIC	1,039	1,063	69	925	1	1	6	-	-	11
Upstate N.Y.	99	99	7	160	1	-	1	-	-	6
N.Y. City	651	664	44	357	-	1	5	-	-	-
N.J.	122	122	4	170	-	-	-	-	-	1
Pa.	167	178	14	238	-	-	-	-	-	4
E.N. CENTRAL	369	483	39	826	-	2	7	-	-	118
Ohio	78	69	10	153	-	2	4	-	-	14
Ind.	61	30	13	119	-	-	-	-	-	18
Ill.	132	282	16	327	-	-	1	-	-	44
Mich.	70	76	-	178	-	-	2	-	-	-
Wis.	28	26	-	49	-	-	-	-	-	42
W.N. CENTRAL	152	130	16	160	6	-	3	-	1	286
Minn.	23	44	1	30	-	-	-	-	-	57
Iowa	7	8	3	25	-	-	1	-	-	94
Mo.	94	67	9	64	5	-	1	-	1	34
N. Dak.	3	1	1	3	-	-	-	-	-	35
S. Dak.	-	-	-	3	-	-	-	-	-	12
Nebr.	4	3	1	6	-	-	-	-	-	25
Kans.	21	7	1	29	1	-	1	-	-	29
S. ATLANTIC	2,181	1,819	83	1,123	5	-	11	1	12	174
Del.	5	3	-	11	-	-	-	-	-	-
Md.	128	140	6	144.	1	-	3	-	7	13
D.C.	142	158	4	43	-	-	-	-	-	-
Va.	155	175	7	101	1	-	2	-	-	87
W. Va.	6	4	1	29	-	-	2	-	-	7
N.C.	176	133	10	181	-	-	-	1	4	-
S.C.	108	130	12	107	3	-	2	-	1	12
Ga.	452	479	19	190	-	-	-	-	-	46
Fla.	1,009	597	24	317	-	-	2	-	-	9
E.S. CENTRAL	599	485	37	482	1	1	8	-	3	118
Ky.	29	20	7	118	-	-	-	-	-	21
Tenn.	161	188	14	175	1	-	2	-	-	79
Ala.	206	134	9	149	-	1	6	-	3	18
Miss.	203	143	7	40	-	-	-	-	-	-
W.S. CENTRAL	1,968	1,699	73	553	2	-	3	-	1	185
Ark.	48	31	5	52	1	-	-	-	-	25
La.	410	373	13	103	-	-	-	-	-	4
Okla.	37	44	4	91	1	-	2	-	-	49
Tex.	1,473	1,251	51	307	-	-	1	-	1	107
MOUNTAIN	224	194	18	149	1	1	5	-	-	19
Mont.	1	8	-	11	-	-	-	-	-	9
Idaho	14	2	1	7	-	-	-	-	-	-
Wyo.	9	2	-	3	-	-	-	-	-	1
Colo.	71	62	-	17	-	1	1	-	-	-
N. Mex.	44	39	8	31	-	-	-	-	-	3
Ariz.	44	44	9	59	-	-	3	-	-	6
Utah	5	3	-	6	1	-	1	-	-	-
Nev.	36	34	-	15	-	-	-	-	-	-
PACIFIC	1,082	1,023	79	1,100	1	2	32	-	1	162
Wash.	24	37	4	65	1	-	-	-	-	-
Oreg.	35	22	2	41	-	-	1	-	-	-
Calif.	992	936	67	919	-	2	30	-	1	116
Alaska	6	4	-	13	-	-	-	-	-	46
Hawaii	25	24	6	62	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	138	164	-	30	-	-	-	-	-	11
V.I.	-	-	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 27, 1982 (12th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	666	448	142	40	18	18	57
Boston, Mass.	185	117	37	15	8	8	31
Bridgeport, Conn.	38	29	6	3	-	-	2
Cambridge, Mass.	20	17	2	1	-	-	3
Fall River, Mass.	32	26	6	-	-	-	-
Hartford, Conn.	54	37	12	3	1	1	1
Lowell, Mass.	32	22	7	1	2	-	-
Lynn, Mass.	28	19	5	3	1	-	2
New Bedford, Mass.	23	16	6	1	-	-	1
New Haven, Conn.	46	24	11	5	1	5	-
Providence, R.I.	59	39	16	2	1	1	4
Somerville, Mass.	13	9	4	-	-	-	-
Springfield, Mass.	41	21	10	5	3	2	3
Waterbury, Conn.	32	25	7	-	-	-	3
Worcester, Mass.	63	47	13	1	1	1	7
MID. ATLANTIC	2,488	1,697	524	138	66	62	110
Albany, N.Y.	56	39	13	1	1	2	-
Allentown, Pa.	21	19	2	-	-	-	-
Buffalo, N.Y.	150	107	31	3	7	2	7
Camden, N.J.	50	33	13	-	4	-	1
Elizabeth, N.J.	32	26	3	1	1	1	1
Erie, Pa.†	41	26	8	1	1	5	1
Jersey City, N.J.	45	32	5	2	2	4	1
N.Y. City, N.Y.	1,47[illegible]	990	316	94	39	32	65
Newark, N.J.	60	22	26	7	2	2	3
Paterson, N.J.	35	20	10	2	1	2	1
Philadelphia, Pa.†	135	95	27	7	4	2	8
Pittsburgh, Pa.†	69	44	14	8	-	3	3
Reading, Pa.	25	18	4	2	1	-	2
Rochester, N.Y.	103	81	15	4	-	3	10
Schenectady, N.Y.	27	22	5	-	-	-	2
Scranton, Pa.†	24	20	4	-	-	-	-
Syracuse, N.Y.	63	43	15	-	2	3	1
Trenton, N.J.	39	26	10	3	-	-	1
Utica, N.Y.	16	13	-	2	1	-	1
Yonkers, N.Y.	26	21	3	1	-	1	2
E.N. CENTRAL	2,193	1,395	522	131	70	75	56
Akron, Ohio	70	42	23	2	3	-	-
Canton, Ohio	42	28	8	5	1	-	1
Chicago, Ill.	539	334	137	35	16	17	15
Cincinnati, Ohio	125	86	31	5	-	3	8
Cleveland, Ohio	156	89	42	13	1	11	-
Columbus, Ohio	129	70	33	12	8	6	4
Dayton, Ohio	89	63	20	3	2	1	1
Detroit, Mich.	269	163	65	16	17	8	9
Evansville, Ind.	44	33	6	1	2	2	-
Fort Wayne, Ind.	60	43	7	3	6	1	-
Gary, Ind.	20	6	7	6	1	-	1
Grand Rapids, Mich.	66	49	11	2	-	4	1
Indianapolis, Ind.	154	92	41	9	4	8	4
Madison, Wis.	45	30	8	3	2	2	4
Milwaukee, Wis.	120	85	22	7	4	2	-
Peoria, Ill.	41	25	11	2	-	3	5
Rockford, Ill.	32	21	8	3	-	-	1
South Bend, Ind.	43	28	13	2	-	-	2
Toledo, Ohio	90	64	19	1	2	4	-
Youngstown, Ohio	59	44	10	1	1	3	-
W.N. CENTRAL	804	559	167	37	17	24	33
Des Moines, Iowa	94	70	19	3	-	2	2
Duluth, Minn.	23	17	3	1	1	1	1
Kansas City, Kans.	33	27	3	-	3	-	1
Kansas City, Mo.	121	75	30	8	1	7	4
Lincoln, Nebr.	45	33	11	1	-	-	4
Minneapolis, Minn.	89	60	14	6	6	3	3
Omaha, Nebr.	107	70	30	3	-	4	3
St. Louis, Mo.	162	115	32	8	3	4	8
St. Paul, Minn.	61	52	6	2	1	-	4
Wichita, Kans.	69	40	19	5	2	3	3
S. ATLANTIC	1,218	744	315	82	41	34	34
Atlanta, Ga.	140	83	41	9	2	5	3
Baltimore, Md.	226	141	57	15	7	6	3
Charlotte, N.C.	54	29	17	7	1	-	2
Jacksonville, Fla.	115	62	30	7	9	7	-
Miami, Fla.	98	54	32	7	4	1	2
Norfolk, Va.	66	40	17	3	3	3	3
Richmond, Va.	89	48	26	6	3	6	6
Savannah, Ga.	33	21	8	3	1	-	1
St. Petersburg, Fla.	112	85	19	5	2	1	6
Tampa, Fla.	59	43	12	3	1	-	2
Washington, D.C.	173	96	47	16	8	4	1
Wilmington, Del.	53	42	9	1	-	1	5
E.S. CENTRAL	756	493	189	35	17	22	39
Birmingham, Ala.	127	81	33	4	4	5	-
Chattanooga, Tenn.	47	33	13	1	-	-	5
Knoxville, Tenn.	58	45	10	2	1	-	4
Louisville, Ky.	107	64	31	7	1	4	13
Memphis, Tenn.	168	114	34	13	4	3	5
Mobile, Ala.	88	51	29	2	3	3	3
Montgomery, Ala.	35	23	8	-	1	3	2
Nashville, Tenn.	126	82	31	6	3	4	7
W.S. CENTRAL	1,412	805	358	127	71	51	65
Austin, Tex.	64	37	15	7	1	4	2
Baton Rouge, La.	64	35	17	8	2	2	5
Corpus Christi, Tex.	47	25	14	5	1	2	2
Dallas, Tex.	164	92	47	15	6	4	2
El Paso, Tex.	58	32	16	5	3	2	5
Fort Worth, Tex.	76	41	23	5	2	5	4
Houston, Tex.	387	187	111	43	34	12	7
Little Rock, Ark.	93	65	14	8	4	2	8
New Orleans, La.	147	85	38	13	4	7	-
San Antonio, Tex.	174	115	33	9	9	8	19
Shreveport, La.	18	13	5	-	-	-	-
Tulsa, Okla.	120	78	25	9	5	3	11
MOUNTAIN	733	443	182	52	34	19	41
Albuquerque, N.Mex.	101	37	28	19	12	3	10
Colo. Springs, Colo.	33	21	8	3	-	1	4
Denver, Colo.	154	95	37	13	4	5	6
Las Vegas, Nev.	75	43	23	5	4	-	4
Ogden, Utah	26	17	7	-	1	1	2
Phoenix, Ariz.	162	111	38	5	4	4	3
Pueblo, Colo.	36	25	8	1	1	1	6
Salt Lake City, Utah	58	36	12	4	3	2	1
Tucson, Ariz.	88	58	21	2	5	2	5
PACIFIC	1,834	1,353	274	75	60	62	104
Berkeley, Calif.	29	23	4	2	-	-	-
Fresno, Calif.	72	40	20	3	7	2	4
Glendale, Calif. §	25	25	-	-	-	-	2
Honolulu, Hawaii	52	32	10	2	3	5	5
Long Beach, Calif.	103	75	22	1	2	3	5
Los Angeles, Calif. §	585	526	5	12	15	17	22
Oakland, Calif.	63	45	8	4	2	4	6
Pasadena, Calif.	29	20	7	1	-	1	3
Portland, Oreg.	111	67	28	4	5	7	4
Sacramento, Calif.	60	44	12	2	2	-	4
San Diego, Calif.	143	80	42	5	6	10	17
San Francisco, Calif.	157	103	33	12	2	7	8
San Jose, Calif.	175	116	37	12	9	1	17
Seattle, Wash.	125	74	29	12	6	4	-
Spokane, Wash.	56	42	11	2	1	-	7
Tacoma, Wash.	49	41	6	1	-	1	-
TOTAL	12,104††	7,937	2,673	717	394	367	539

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Current Trends

Urban Rat Control — United States

During the fourth quarter of fiscal year 1981, urban rat-control programs in 58 communities provided services to 21,000 city blocks containing 3 million people. As a result of these services—which include resident education, code enforcement, improved municipal services, neighborhood cleanup, and supplemental rat killing—programs identified over 2,000 additional environmentally improved blocks (EIB). Blocks are placed in EIB category after having been certified as being rat free for 12 months or more, at which time local resources alone are used to sustain improvements. During fiscal year 1981 programs designated 5,700 EIB.

Since the inception of the Urban Rat Control Program in 1969, local programs have served over 9 million people living in 61,000 blocks, of which almost 42,000 are now classified as EIB.

Reported by Environmental Health Svcs Div, Center for Environmental Health, CDC.

TABLE 1. Status of target-area blocks in Urban Rat-Control Programs, fourth quarter, fiscal year 1981 (July 1-September 30)

Program community	Target-area blocks				Environmentally improved blocks*	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			<12 months	≥12 months		
REGION I	905	527	298	80	0	1,154
Bridgeport	220	124	96	0	0	0
Hartford	317	154	101	62	0	313
Boston	368	249	101	18	0	53
Previously funded programs						788
REGION II	3,266	1,499	910	650	698	5,493
Atlantic City	202	14	83	0	0	0
Camden	232	134	60	38	10	119
Jersey City	183	70	75	38	57	260
Newark	176	14	101	61	43	43
New York City	1,134	516	294	324	242	1,219
Rochester	227	125	49	53	34	446
Yonkers	80	72	8	0	36	145
Aguadilla	115	95	11	9	25	254
Arecibo	102	41	61	0	55	291
Guayama	176	157	19	0	40	40
Mayaguez	155	91	64	0	25	239
Ponce	226	49	25	50	31	378
San Juan	258	121	60	77	100	405
Previously funded programs						1,654
REGION III	3,506	1,491	1,120	487	199	7,946
"War on Rats"	1,004	425	279	119	0	1,233
Baltimore	368	156	72	140	0	306
Chester	181	72	65	23	0	116
NE Pa. V.C. Assn.†	541	291	101	34	83	1,354
Philadelphia	1,016	445	499	72	22	1,564
Pittsburgh	396	102	104	99	94	1,470
Previously funded programs						1,903

Urban Rat Control – Continued

TABLE 1. Status of target-area blocks in Urban Rat-Control Programs, fourth quarter, fiscal year 1981 (July 1-September 30) – *Continued*

Program Community	Target-area blocks				Environmentally improved blocks*	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			<12 months	≥12 months		
REGION IV	4,228	1,483	1,924	357	304	7,863
Mobile	71	38	33	0	52	669
Tuscaloosa	295	74	197	24	49	49
Miami	1,606	520	728	135	83	1,103
Pensacola	267	100	167	0	87	322
Atlanta, Ga.‡	728	337	129	21	0	0
DeKalb Co. Ga	335	88	153	94	0	405
Lexington	194	35	159	0	33	123
Louisville	480	179	256	45	0	770
Memphis	252	112	102	38	0	564
Previously funded programs						3,858
REGION V	4,875	1,475	1,913	367	366	5,508
Chicago	490	212	257	21	0	10
Peoria	249	20	84	145	75	75
Indianapolis	351	166	185	0	0	417
Benton Harbor	87	13	74	0	32	103
Detroit	1,210	159	61	0	0	706
Highland Park	148	61	87	0	72	72
Saginaw	355	50	175	0	108	108
Washtenaw Co.-Ypsilanti	264	85	144	35	0	0
Wayne Co.-Ecorse	193	88	91	14	0	0
Akron	194	88	70	36	60	670
Barberton	122	3	107	12	7	175
Cincinnati	124	39	83	2	11	188
Cleveland	312	182	130	0	1	735
Columbus	282	75	143	64	0	283
Toledo	149	22	127	0	0	189
Youngstown	210	103	69	38	0	10
Milwaukee	135	109	26	0	0	0
Previously funded programs						1,767
REGION VI	1,399	646	435	192	300	7,009
Little Rock	349	81	175	93	53	53
Pine Bluff	175	76	99	0	43	233
New Orleans	301	214	29	58	169	3,139
Houston	574	275	132	41	35	2,326
Previously funded programs						1,258
REGION VII	582	226	269	87	147	4,286
Kansas City, Mo.	124	54	70	0	0	747
St. Louis	244	111	77	56	77	1,168
Omaha	214	61	122	31	70	734
Previously funded programs						1,637
REGION IX	511	186	221	104	0	1,726
Los Angeles	130	9	52	69	0	435
Oakland	187	96	83	8	0	279
San Francisco	194	81	86	27	0	341
Previously funded programs						671
Region X						830
Previously funded programs						830
Total	19,272	7,533	7,090	2,324	2,014	41,815

*Contiguous blocks where maintenance has been achieved and sustained for a minimum of 12 months. These blocks are no longer part of the approved project target area.

†Northwestern Pennsylvania Vector Control Association. Serves Lackawanna and Luzerne counties and the cities of Nanticoke, Wilkes-Barre, and Hazleton.

‡Target-area blocks are confined to public housing projects.

International Notes

Smallpox Vaccination

Following the global eradication of smallpox, the Thirty-Fourth World Health Assembly of the World Health Organization (WHO) by resolution amended the International Health Regulations to remove smallpox from the diseases subject to the Regulations, effective January 1, 1982 (*1*).

According to WHO, the collaboration of national health administrations in withdrawing the requirement for smallpox vaccination certificates has been very positive. All the countries of the world except Chad, in Africa, have advised WHO that an International Certificate of Vaccination against Smallpox is no longer required from any traveler. However, WHO reports that some local authorities in Democratic Kampuchea may require proof of vaccination. Because of the risk of complications of vaccination to both vaccinees and their contacts, physicians should give travelers to any country in which a certificate may be required a signed statement that vaccination is medically contraindicated. Smallpox vaccination should not be given for international travel.

Reported by the Quarantine Div, Center for Prevention Svcs, and International Health Program Office, CDC.

Editorial Note: The change in the International Health Regulations removes smallpox from the list of internationally quarantinable diseases and eliminates the legal basis for requirement of smallpox vaccination of international travelers.

A new revision of the International Certificates of Vaccination from which the smallpox vaccination certificate has been deleted will be available in the next several months.

In the United States, smallpox vaccination of civilians is recommended only if they are laboratory workers directly in contact with smallpox or other closely related orthopox viruses (*2*).

In 1981, the California Board of Medical Quality Assurance revoked the medical license of a physician who administered smallpox vaccine to a 53-year old man with chronic lymphocytic leukemia in an attempt to treat recurrent herpes labialis (*3*). The patient developed severe vaccinia necrosum. The California board stayed the revocation of the physician's medical license and placed him on probation for 5 years.

Smallpox vaccine is ineffective in the treatment of any disease.

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The Morbidity and Mortality Weekly Report, circulation 106,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Current Trends

Influenza Update — United States

Three type A(H3N2) virus isolates associated with sporadic cases of influenza have been reported from the U.S. Air Force School of Aerospace Medicine in San Antonio, Texas. These isolates were collected on March 3 from an enlisted servicewoman at Eglin Air Force Base in Florida and on March 8 and 9 from 2 young children with influenza at Brooks Air Force Base in Texas. North Carolina has reported its first influenza virus isolates for the season, both type B, collected during the second week of March from 2 children. At the time of the isolations, increased school absenteeism associated with influenza-like illness was noted in western North Carolina by health authorites. The first type A(H1N1) isolates reported from Michigan this season were obtained in early March from 2 adults with sporadic influenza cases.

Reported by Epidemiology Division, U.S. Air Force School of Aerospace Medicine, Brooks Air Force Base, San Antonio, C Webb, Jr, MD, State Epidemiologist, Texas State Dept of Health; R Gunn, MD, State Epidemiologist, Florida State Dept of Health and Rehabilitative Svcs; S Neshiem, MD, P Boland, MD, Murphy, K Kleeman, PhD, M Hines, DVM, State Epidemiologist, North Carolina State Dept of Human Resources; A Monto, MD, University of Michigan, Ann Arbor, G Anderson, DVM, W Hall, MD, N Hayner, MD, State Epidemiologist, Michigan Dept of Public Health; Field Svcs Div, Epidemiology Program Office, Influenza Br, Center for Infectious Diseases, CDC.

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Epidemiologic Notes and Reports

Common-Source Outbreaks of Trichinosis – New York City, Rhode Island

Forty-six cases of trichinosis including 1 death were diagnosed in the period November-December 1981 in 3 common-source outbreaks reported from New York City and Rhode Island. All 3 outbreaks were associated with eating pork from hogs purchased directly from farms and prepared in ethnic dishes calling for raw or partially cooked pork.

New York City: Eight cases of trichinosis were reported to the New York City Department of Health from 2 Brooklyn hospitals on November 16, 1981. The patients were members of 3 related families of Italian heritage. A ninth case was subsequently diagnosed in the course of the investigation. One patient died. The outbreak appeared to be associated with eating dried, homemade pork sausage.

The index patient was a 55-year-old woman who had onset of symptoms on November 4, 1981, 10 days after eating some of the pork sausage. Her initial symptoms included nausea, vomiting, diarrhea, myalgia, and abdominal pain. When she became febrile, she was hospitalized. By the nineteenth day of hospitalization, the patient had developed bronchopneumonia, pulmonary edema, paralytic ileus, and motor paralysis; she died the same day. Autopsy findings revealed bronchopneumonia, pulmonary artery thrombosis, pulmonary edema, mild cardiomegaly and chronic myocarditis, hepatomegaly, and renal vein thrombosis. No *Trichinella* larvae were identified in the brain, although fresh thromboses were noted in blood vessels. Multiple muscle samples were positive for *Trichinella*.

The other 8 patients had eaten dried, uncooked, or lightly fried sausage on 2 occasions, November 4 and 11. Onset of symptoms ranged from 2 to 13 days after eating the initial serving of sausage. Of the symptoms commonly associated with clinical trichinosis, all patients had fever (temperatures ranging from 37.9 C to 39.1 C [100.2 F to 102.4 F]), periorbital edema and muscle pain. Six of 8 patients had abdominal pain; 5 of 8 had diarrhea. Two patients reported headache, and 2 had subconjunctival hemorrhages. Most patients received oral or intravenous steroid therapy; at least 2 also received thiabendazole. Laboratory studies revealed that all of the 8 patients whose blood was examined had eosinophilia (range) 4%-57%). Six of 7 patients whose specimens were tested for antibody to *Trichinella* with the bentonite flocculation (BF) test had titers compatible with recent infection ($\geq$10), and 3 patients from whom additional specimens were tested approximately 7 weeks after onset of symptoms had a $\geq$4-fold rise in titer to *Trichinella*.

Interviews with family members revealed that the sausage had been prepared from a pig purchased and slaughtered at a farm in Green County, New York. Two other pigs kept at the farm over the past year had been slaughtered for consumption by the farm owner. The car-

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Trichinosis – Continued

cass of the pig that had been purchased was brought to New York City, where it was hung and dried indoors for 2 days; the carcass was then butchered, and sausages were prepared and hung to dry for another 10 days. The sausages were then eaten raw by 8 patients. The ninth patient fried the sausage lightly before eating it. Samples of sausage were examined by the hospital pathologist, who identified multiple encysted larvae of *T. spiralis.*

Sausage prepared by the farmer with meat from the other 2 pigs was examined at the Animal Parasitology Institute, United States Department of Agriculture (USDA), and found to contain *Trichinella.* The farmer insisted that the pigs had been fed only grains. However, the farmer went hunting frequently and fed portions of killed game to pet dogs. It was not known whether the pigs had also eaten portions of such meat.

Rhode Island: On November 23, 1981, the Rhode Island Department of Health was notified by the Indochinese Unit of the State Department of Social and Rehabilitative Services of an outbreak in that state. A group of Kampuchean refugees were experiencing swollen eyes, myalgia, and fever; several had been hospitalized. The symptoms plus eosinophilia and elevated creatinine phosphokinase (CPK) levels suggested trichinosis; this diagnosis was confirmed on the basis of findings from a muscle biopsy performed on 1 hospitalized patient. An investigation begun November 24 showed that on October 15, 11 Kampuchean families had shared a meal in the home of 1 family. The main dish was spiced, boiled meat and viscera of a pig that had been purchased the same day from a local farm. Forty-nine family members reported eating the pork either at that meal or subsequently at their homes. Between November 11 and 28, 26 persons became ill with signs and symptoms that included fever and either myalgia or periorbital edema.Trichinosis was confirmed for 24 of the 26 ill persons on the basis of positive BF titers (ranging from 5 to 640) measured in serum specimens obtained between 48 and 75 days after the shared meal. The other 23 asymptomatic family members were negative for trichinal antibodies. Five of the most severely ill persons were hospitalized; serum CPK values for these patients ranged from 544 to 7,360 International Units (IU). Of the 24 trichinosis patients, who ranged in age from 2 to 66 years, 15 were male. All symptomatic individuals recovered without specific therapy. Staff of the Animal Parasitology Institute, USDA, investigated the farm from which the implicated pig had been obtained. The farmer stated that he only kept a few pigs at a time and that they were not fed garbage. A land-fill dump was located approximately 2 miles from the farm. Four hogs purchased from the farmer were killed, and the tissues were examined by direct microscopy and digestion of tissues. Blood samples were taken from 5 other pigs for serologic tests. All tissues and serum specimens were negative for *Trichinella* in these tests. Thirty-two rats trapped and killed on the farm were negative for *Trichinella* larva.

A second outbreak occurred in Rhode Island in early December 1981. The Rhode Island Department of Health was notified by staff at a hospital emergency room of a group of Laotian refugees with trichinosis-like illness. Investigation revealed that on November 24, 30 members of 4 extended families had shared a meal that included raw pork from a pig purchased at the same farm involved in the first Rhode Island outbreak discussed above. Between December 10 and 29, 13 of these 31 persons became ill with signs and symptoms including fever, periorbital edema, myalgia, eosinophilia (≥10%), and elevated serum CPK levels (>250 IU). Four patients were hospitalized, and *T. spiralis* larvae were identified in material from muscle biopsies performed on 2 women ages 22 and 33 years. The patients ranged in age from 7 to 66 years, and 8 of the 13 were male. All recovered. Single or paired serum specimens obtained from 4 patients and from 4 exposed but asymptomatic persons were sent to CDC for BF testing. All 4 patients and 3 of the 4 asymptomatic persons had single

Trichinosis — Continued

titers of ≥40 and/or a 4-fold rise in titer between acute- and convalescent-phase specimens. A sample of pork from the implicated meal was examined at CDC in an artificial digestion procedure that revealed a low concentration of *T. spiralis* larvae.

Intensive efforts were made to educate Indochinese families in Rhode Island about the need to cook pork adequately. All state health-care providers and social service agencies were requested to emphasize this recommendation to their refugee populations.

Reported by R Rotolo, MD, R Garcia, A Habib, MD, S Florio, MD, Wyckoff Heights Hospital, M Bonventre, MD, L Hair, Brooklyn Hospital, S Friedman, MD, V Skeete, MS, D Somerset, E Galaid, MPH, New York City Dept of Health, I London, MD, DL Morse, MD, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; D Lowe, MD, St. Joseph Hospital, Providence, A Werhan, A Parillo, DVM, GA Faich, MD, State Epidemiologist, Rhode Island State Dept of Health; KD Murrell, PhD, Agricultural Research Service, Animal Parasitology Research Institute, US Dept of Agriculture; Field Svcs Div, Epidemiology Program Office, Parasitic Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Trichinosis remains a public health problem in the United States primarily because the infection is enzootic among domestic swine. Surveillance indicates that in 75% of cases for which a probable source is identified, a pork product is incriminated as the source of infection and that ground beef—probably adulterated with pork—accounts for some of the other 25% (*1-3*). Since 1947, when the Public Health Service began collecting data on cases reported from all the states, the annual incidence of reported human cases has declined from 300-400 cases/year to <150. Since 1966, the annual number of reported cases appears to have stabilized at 100-150, with an average of 1 death/year (*1*). Factors that accounted for the decline in the number of humans infected include: 1) state laws that (although directed at preventing other diseases by prohibiting the feeding of raw garbage to swine) have reduced trichinosis in swine; 2) widespread commercial and home freezing of pork, which kills trichinae; 3) consumer awareness of the need to cook pork products adequately; and 4) a national trend to consume more beef than pork.

Trichinosis has occurred most frequently among members of ethnic groups who enjoy eating raw pork (*3-4*). It has been observed that some outbreaks have occurred among new immigrants who apparently did not understand the need to cook, freeze, or otherwise treat American pork thoroughly in order to kill *Trichinella* larvae. As evidenced by the 2 outbreaks in Rhode Island discussed above, certain groups among the culturally diverse refugees from Southeast Asia must be included in the group at high risk of acquiring trichinosis. Identifying citizens of European ancestry and recent immigrants who belong to ethnic groups that traditionally eat raw pork as "high-risk groups" suggests these groups as targets for special health education as an effort to reduce the potential for further outbreaks.

For approximately two-thirds of the reported cases of pork-associated trichinosis, the incriminated item is a USDA-inspected pork product purchased at a local supermarket or butcher shop (*3*). The outbreaks reported here are unusual in that the pork was acquired directly from a farm. The most recent data on the prevalence of trichinosis among commercially slaughtered swine indicate that approximately 1/1,000 carcasses is infected (*5*). However, feeding raw garbage to swine, a practice prohibited by law in most states but difficult to enforce, and certain other swine-management practices may result in higher infection rates. Therefore, the rate of infection among hogs purchased directly from farms may be considerably higher than among the 70-80 million hogs that pass through commercial channels each year.

Currently, the Animal Parasitology Institute, USDA, in collaboration with investigators from the Pathobiology Department, University of Pennsylvania, are conducting prevalence studies on hogs in garbage-fed and grain-fed operations in the eastern United States; this study is de-

Trichinosis – Continued

signed to obtain a better understanding of the roles that wildlife and the feeding of garbage play in swine trichinosis.

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TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE	13th WEEK ENDING			CUMULATIVE, FIRST 13 WEEKS		
	April 3 1982	April 4 1981	MEDIAN 1977-1981	April 3 1982	April 4 1981	MEDIAN 1977-1981
Aseptic meningitis	75	55	55	958	846	640
Brucellosis	5	3	3	25	19	41
Encephalitis: Primary (arthropod-borne & unspec.)	13	8	10	175	183	151
Post-infectious	2	4	4	11	21	39
Gonorrhea: Civilian	16,009	19,850	17,825	227,570	241,305	236,316
Military	489	391	469	6,606	7,137	6,812
Hepatitis: Type A	454	455	537	5,607	6,235	6,790
Type B	473	361	300	4,800	4,621	3,933
Non A, Non B	56	N	N	448	N	N
Unspecified	176	203	190	2,294	2,648	2,557
Legionellosis	6	N	N	64	N	N
Leprosy	7	1	3	38	49	37
Malaria	17	18	11	174	295	122
Measles (rubeola)	44	77	517	231	690	4,002
Meningococcal infections: Total	101	83	66	865	1,290	874
Civilian	101	82	65	861	1,287	865
Military	–	1	–	4	3	9
Mumps	236	103	341	1,683	1,398	4,987
Pertussis	40	23	23	261	257	263
Rubella (German measles)	98	77	360	805	668	3,377
Syphilis (Primary & Secondary): Civilian	530	474	474	8,296	7,533	6,097
Military	10	6	6	96	102	81
Tuberculosis	550	463	582	6,007	6,016	6,546
Tularemia	4	–	1	21	24	23
Typhoid fever	13	15	11	98	115	103
Typhus fever, tick-borne (RMSF)	1	2	1	19	14	14
Rabies, animal	137	184	123	1,237	1,610	850

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Calif. 1)	18	Paralytic	1
Cholera	1	Psittacosis (Mass. 1, Wash. 1, Calif. 1)	20
Congenital rubella syndrome (Ariz. 1)	2	Rabies, human	–
Diphtheria	–	Tetanus (Va. 1, Ark. 1)	11
Leptospirosis (Tex. 1, Hawaii 2)	15	Trichinosis (Mass. 1)	28
Plague	2	Typhus fever, flea-borne (endemic, murine)	3

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending April 3, 1982 and April 4, 1981 (13th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	75	25	175	11	227,570	241,305	454	473	56	176	6	38
NEW ENGLAND	-	-	10	3	5,509	5,994	11	16	-	5	1	1
Maine	-	-	-	-	254	291	1	-	-	-	-	-
N.H.	U	-	-	-	152	220	U	U	U	U	U	-
Vt.	-	-	-	-	113	100	2	-	-	-	-	-
Mass.	-	-	3	-	2,508	2,439	3	3	-	5	-	-
R.I.	-	-	-	-	400	284	3	3	-	-	-	-
Conn.	-	-	7	3	2,082	2,660	2	10	-	-	1	1
MID. ATLANTIC	12	-	24	2	27,954	27,839	69	79	12	14	1	3
Upstate N.Y.	-	-	11	-	4,504	4,353	16	13	2	3	-	-
N.Y. City	2	-	9	-	12,073	11,025	26	24	-	6	1	1
N.J.	6	-	4	-	4,751	5,726	27	42	10	5	-	1
Pa.	4	-	4	2	6,626	6,735	U	U	U	U	-	1
E.N. CENTRAL	8	-	39	3	28,754	38,135	59	54	3	27	1	-
Ohio	1	-	13	1	8,943	13,202	14	4	2	4	-	-
Ind.	2	-	11	2	3,909	3,091	14	14	-	12	-	-
Ill.	-	-	-	-	4,896	10,377	4	2	1	2	-	-
Mich.	3	-	13	-	7,969	8,169	23	31	-	9	1	-
Wis.	2	-	2	-	3,037	3,296	4	3	-	-	-	-
W.N. CENTRAL	4	2	11	-	10,766	11,417	19	27	-	5	1	-
Minn.	-	-	-	-	1,586	1,981	5	5	-	1	-	-
Iowa	1	1	6	-	1,181	1,135	3	-	-	-	-	-
Mo.	1	1	3	-	4,851	5,140	9	16	-	4	1	-
N. Dak.	-	-	-	-	138	150	-	-	-	-	-	-
S. Dak.	-	-	-	-	309	305	-	-	-	-	-	-
Nebr.	2	-	1	-	683	834	1	6	-	-	-	-
Kans.	-	-	1	-	2,018	1,972	1	-	-	-	-	-
S. ATLANTIC	18	10	21	1	58,737	60,219	19	91	10	30	2	2
Del.	-	-	-	-	939	922	1	2	-	1	-	-
Md.	3	-	9	-	7,854	6,414	3	15	3	4	1	-
D.C.	-	-	-	-	3,021	3,994	-	3	-	-	-	-
Va.	-	4	6	-	5,106	5,640	1	7	1	1	-	-
W. Va.	1	-	-	-	694	866	1	-	-	1	-	-
N.C.	-	-	1	-	9,708	9,743	2	5	-	3	-	-
S.C.	1	1	-	-	5,646	5,396	3	10	1	3	-	-
Ga.	1	1	-	-	9,483	12,063	9	17	-	6	-	-
Fla.	12	4	5	1	16,286	15,181	19	32	5	11	1	2
E.S. CENTRAL	3	3	10	1	19,293	20,058	18	18	3	2	-	-
Ky.	2	-	-	-	2,584	2,557	2	4	-	-	-	-
Tenn.	-	1	7	-	7,320	7,258	12	7	2	-	-	-
Ala.	1	1	2	1	5,881	6,659	2	7	1	2	-	-
Miss.	-	1	1	-	3,508	3,586	2	-	-	-	-	-
W.S. CENTRAL	13	4	15	-	32,772	33,539	96	44	2	51	-	3
Ark.	-	2	-	-	2,728	2,206	1	1	1	3	-	-
La.	4	-	2	-	5,953	5,258	9	8	1	8	-	-
Okla.	4	2	6	-	3,404	3,318	18	14	-	5	-	-
Tex.	5	-	7	-	20,687	22,757	68	21	-	35	-	3
MOUNTAIN	1	-	7	1	8,497	9,797	30	10	3	11	-	1
Mont.	-	-	-	-	359	351	2	-	-	-	-	-
Idaho	-	-	-	-	346	391	1	-	-	-	-	1
Wyo.	-	-	-	-	233	209	1	1	-	-	-	-
Colo.	1	-	1	1	2,283	2,537	10	1	-	-	-	-
N. Mex.	-	-	-	-	1,030	1,155	-	-	-	-	-	-
Ariz.	-	-	2	-	2,343	3,201	10	6	3	3	-	-
Utah	-	-	-	-	375	450	2	-	-	6	-	-
Nev.	-	-	4	-	1,528	1,503	4	2	-	2	-	-
PACIFIC	16	6	38	-	35,288	34,307	113	134	23	31	-	28
Wash.	-	-	3	-	3,035	3,221	4	-	-	-	-	2
Oreg.	-	-	-	-	2,025	2,613	4	6	2	-	-	-
Calif.	13	5	33	-	28,689	26,767	101	125	26	30	-	19
Alaska	-	1	2	-	916	947	1	1	1	-	-	-
Hawaii	3	-	-	-	623	759	3	2	-	1	-	7
Guam	U	-	-	-	5	37	U	U	U	U	U	-
P.R.	-	-	1	-	689	851	6	4	-	4	-	-
V.I.	U	-	-	-	51	24	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	118	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 3, 1982 and April 4, 1981 (13th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	17	174	44	231	690	101	865	236	1,683	40	98	805	668
NEW ENGLAND	2	14	1	5	26	9	48	5	84	-	-	9	61
Maine	-	-	-	-	2	-	2	1	21	-	-	-	31
N.H.	U	1	U	-	4	U	8	U	8	U	U	9	21
Vt.	-	-	-	2	1	-	3	-	4	-	-	-	-
Mass.	2	9	1	1	15	5	13	4	35	-	-	-	5
R.I.	-	1	-	-	-	3	8	-	7	-	-	-	-
Conn.	-	3	-	2	4	1	14	-	9	-	-	-	4
MID. ATLANTIC	3	16	3	31	238	16	130	13	98	10	10	41	81
Upstate N.Y.	-	2	2	17	148	2	32	1	22	6	4	22	32
N.Y. City	3	7	1	12	23	6	26	2	18	2	-	10	17
N.J.	-	4	-	-	17	3	34	2	20	1	6	9	30
Pa.	-	3	-	2	50	5	38	8	38	1	-	-	2
E.N. CENTRAL	-	12	-	15	44	23	101	171	1,002	24	1	58	148
Ohio	-	2	-	-	13	11	42	149	718	3	-	-	-
Ind.	-	1	-	1	3	1	7	2	19	1	-	8	50
Ill.	-	-	-	6	6	7	21	9	47	19	1	17	42
Mich.	-	8	-	8	22	2	23	11	147	-	-	18	18
Wis.	-	1	-	-	-	2	8	-	71	1	-	15	38
W.N. CENTRAL	1	5	1	1	4	4	37	8	65	2	3	19	34
Minn.	-	-	-	-	1	-	9	-	3	-	-	1	6
Iowa	1	2	-	-	1	-	4	3	18	-	-	-	-
Mo.	-	1	1	1	-	3	14	1	11	1	3	12	1
N. Dak.	-	-	-	-	-	-	4	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	-	1	-	1	-
Nebr.	-	1	-	-	1	1	2	-	-	-	-	-	1
Kans.	-	1	-	-	1	-	3	4	33	-	-	5	26
S. ATLANTIC	3	32	2	18	197	16	181	8	128	3	1	19	62
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	1	6	-	1	1	-	6	-	10	-	-	4	-
D.C.	-	3	-	1	1	-	1	-	-	-	-	-	-
Va.	1	13	-	9	3	1	16	1	17	1	1	9	1
W. Va.	-	-	-	1	7	2	7	3	61	-	-	1	15
N.C.	-	-	-	-	-	1	28	-	4	-	-	-	3
S.C.	-	2	-	-	-	3	24	2	7	1	-	1	4
Ga.	-	2	-	-	74	3	51	-	2	1	-	1	17
Fla.	1	6	2	6	111	6	48	2	24	-	-	3	22
E.S. CENTRAL	1	1	1	5	-	1	54	3	20	-	2	13	15
Ky.	1	1	-	1	-	-	3	-	7	-	2	13	10
Tenn.	-	-	1	4	-	1	24	2	8	-	-	-	5
Ala.	-	-	-	-	-	-	25	1	3	-	-	-	-
Miss.	-	-	-	-	-	-	2	-	2	-	-	-	-
W.S. CENTRAL	1	6	2	26	47	13	122	7	60	1	4	44	43
Ark.	-	-	-	-	-	-	8	-	3	-	-	-	-
La.	-	1	-	-	-	-	17	1	1	-	-	-	6
Okla.	-	-	-	-	3	-	9	-	-	-	-	1	-
Tex.	1	5	2	26	44	13	88	6	56	1	4	43	37
MOUNTAIN	-	3	-	-	11	7	55	2	30	-	3	18	29
Mont.	-	-	-	-	-	-	4	-	3	-	-	1	1
Idaho	-	-	-	-	-	-	4	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	-	4	1
Colo.	-	2	-	-	3	2	20	-	5	-	-	1	16
N. Mex.	-	-	-	-	-	-	7	-	-	-	-	1	1
Ariz.	-	1	-	-	1	5	10	2	10	-	3	4	1
Utah	-	-	-	-	-	-	3	-	6	-	-	5	3
Nev.	-	-	-	-	7	-	3	-	2	-	-	2	4
PACIFIC	6	85	34	130	123	12	137	19	196	-	74	584	195
Wash.	-	7	-	14	1	1	14	1	34	-	1	15	37
Oreg.	-	2	-	-	-	2	26	-	-	-	-	2	20
Calif.	5	74	33	114	122	9	90	18	157	-	71	562	138
Alaska	-	-	-	-	-	-	5	-	4	-	-	1	-
Hawaii	1	2	1	2	-	-	2	-	1	-	2	4	-
Guam	U	-	U	-	4	U	-	U	1	U	U	1	-
P.R.	-	2	4	43	88	-	3	2	14	1	-	3	1
V.I.	U	-	U	-	3	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 3, 1982 and April 4, 1981 (13th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	8,296	7,533	550	6,007	21	13	98	1	19	1,237
NEW ENGLAND	169	174	28	172	-	-	10	-	-	5
Maine	-	1	-	11	-	-	-	-	-	5
N.H.	-	8	U	6	-	U	-	U	-	-
Vt.	-	6	1	6	-	-	2	-	-	-
Mass.	117	102	23	113	-	-	7	-	-	-
R.I.	11	13	-	16	-	-	-	-	-	-
Conn.	41	44	4	20	-	-	1	-	-	-
MID. ATLANTIC	1,119	1,140	95	1,020	1	5	11	-	-	14
Upstate N.Y.	114	99	18	178	1	1	2	-	-	9
N.Y. City	696	719	45	402	-	2	7	-	-	-
N.J.	131	129	16	186	-	2	2	-	-	1
Pa.	178	193	16	254	-	-	-	-	-	4
E.N. CENTRAL	396	537	115	937	-	1	8	-	-	137
Ohio	84	72	23	176	-	-	4	-	-	22
Ind.	62	32	2	121	-	-	-	-	-	21
Ill.	132	302	23	350	-	-	1	-	-	52
Mich.	88	103	60	234	-	1	3	-	-	-
Wis.	30	28	7	56	-	-	-	-	-	42
W.N. CENTRAL	162	134	17	176	6	-	3	-	1	324
Minn.	25	47	1	31	-	-	-	-	-	64
Iowa	7	8	4	29	-	-	1	-	-	106
Mo.	98	68	12	76	5	-	1	-	1	41
N. Dak.	4	1	-	3	-	-	-	-	-	37
S. Dak.	-	-	-	3	-	-	-	-	-	12
Nebr.	5	3	-	6	-	-	-	-	-	31
Kans.	23	7	-	28	1	-	1	-	-	33
S. ATLANTIC	2,324	1,958	61	1,184	5	1	12	-	12	198
Del.	6	3	-	11	-	-	-	-	-	-
Md.	139	156	U	144	1	-	3	-	7	13
D.C.	147	173	2	45	-	-	-	-	-	-
Va.	170	186	12	113	1	-	2	-	-	100
W. Va.	6	4	3	32	-	-	2	-	-	9
N.C.	182	153	10	191	-	-	-	-	4	1
S.C.	113	134	7	114	3	-	2	-	1	14
Ga.	497	508	-	190	-	-	-	-	-	51
Fla.	1,064	641	27	344	-	1	3	-	-	10
E.S. CENTRAL	636	514	31	513	3	1	9	1	4	155
Ky.	30	21	10	128	-	-	-	-	-	26
Tenn.	169	200	5	180	3	-	2	-	-	107
Ala.	220	143	9	158	-	-	6	-	3	22
Miss.	217	150	7	47	-	1	1	1	1	-
W.S. CENTRAL	2,099	1,770	91	644	3	1	4	-	1	210
Ark.	53	34	10	62	2	-	-	-	-	28
La.	426	378	20	123	-	-	-	-	-	5
Okla.	41	44	10	101	1	-	2	-	-	52
Tex.	1,579	1,314	51	358	-	1	2	-	1	125
MOUNTAIN	231	197	16	165	2	-	5	-	-	20
Mont.	1	9	3	14	-	-	-	-	-	9
Idaho	16	2	-	7	1	-	-	-	-	-
Wyo.	9	2	-	3	-	-	-	-	-	2
Colo.	75	65	-	17	-	-	1	-	-	-
N. Mex.	43	39	2	33	-	-	-	-	-	3
Ariz.	46	44	9	68	-	-	3	-	-	6
Utah	6	3	-	6	1	-	1	-	-	-
Nev.	35	34	2	17	-	-	-	-	-	-
PACIFIC	1,160	1,109	96	1,196	1	4	36	-	1	174
Wash.	24	39	7	72	1	-	-	-	-	-
Oreg.	36	25	2	43	-	-	1	-	-	-
Calif.	1,069	1,017	76	995	-	4	34	-	1	125
Alaska	6	4	-	13	-	-	-	-	-	49
Hawaii	25	24	11	73	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	149	183	-	57	-	-	-	-	-	11
V.I.	-	-	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending April 3, 1982 (13th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	704	476	159	34	16	19	67
Boston, Mass.	217	138	51	13	6	9	26
Bridgeport, Conn.	56	31	19	4	1	1	4
Cambridge, Mass.	27	18	7	1	1	-	5
Fall River, Mass.	24	16	4	1	2	1	1
Hartford, Conn.	74	51	17	1	3	2	2
Lowell, Mass.	26	15	10	-	1	-	2
Lynn, Mass.	22	15	6	1	-	-	1
New Bedford, Mass.	23	17	3	3	-	-	3
New Haven, Conn.	49	34	9	4	2	-	6
Providence, R.I.	41	30	6	3	-	2	7
Somerville, Mass.	9	8	1	-	-	-	1
Springfield, Mass.	44	31	8	2	1	2	4
Waterbury, Conn.	25	21	4	-	-	-	5
Worcester, Mass.	67	49	14	1	1	2	-
MID. ATLANTIC	2,570	1,698	591	161	46	74	100
Albany, N.Y.	57	38	8	4	3	4	2
Allentown, Pa.	20	16	3	1	-	-	-
Buffalo, N.Y.	152	100	37	8	4	3	7
Camden, N.J.	52	33	13	2	-	4	2
Elizabeth, N.J.	19	13	4	2	-	-	1
Erie, Pa.†	40	25	14	-	-	1	1
Jersey City, N.J.	59	40	10	3	2	4	4
N.Y. City, N.Y.	1,377	900	315	97	29	36	52
Newark, N.J.	54	33	12	6	2	1	4
Paterson, N.J.	39	22	10	1	-	6	-
Philadelphia, Pa.†	262	166	72	19	-	5	9
Pittsburgh, Pa.†	82	53	24	3	-	2	5
Reading, Pa.	32	22	8	2	-	-	-
Rochester, N.Y.	111	74	24	6	1	6	5
Schenectady, N.Y.	25	19	2	3	1	-	-
Scranton, Pa.†	31	25	5	-	1	-	2
Syracuse, N.Y.	87	65	16	4	2	-	1
Trenton, N.J.	24	17	6	-	-	1	-
Utica, N.Y.	25	19	6	-	-	-	3
Yonkers, N.Y.	22	18	2	-	1	1	2
E.N. CENTRAL	2,174	1,356	533	152	64	69	75
Akron, Ohio	39	27	10	1	1	-	-
Canton, Ohio	33	24	8	1	-	-	-
Chicago, Ill.	523	324	127	42	20	10	21
Cincinnati, Ohio	101	72	19	2	1	7	13
Cleveland, Ohio	194	121	47	16	3	7	4
Columbus, Ohio	139	77	37	12	7	6	3
Dayton, Ohio	111	63	35	11	2	-	-
Detroit, Mich.	268	144	76	26	11	11	6
Evansville, Ind.	48	33	10	4	-	1	2
Fort Wayne, Ind.	49	35	10	1	2	1	5
Gary, Ind.	25	11	10	3	1	-	1
Grand Rapids, Mich.	46	28	11	4	1	2	2
Indianapolis, Ind.	160	105	40	7	3	5	5
Madison, Wis.	14	9	2	1	-	2	2
Milwaukee, Wis.	130	83	28	8	5	6	-
Peoria, Ill.	51	30	11	2	2	6	4
Rockford, Ill.	43	31	8	2	2	-	2
South Bend, Ind.	58	43	11	3	1	-	3
Toledo, Ohio	98	67	20	5	2	4	2
Youngstown, Ohio	44	29	13	1	-	1	-
W.N. CENTRAL	711	465	153	28	19	46	31
Des Moines, Iowa	71	48	21	2	-	-	4
Duluth, Minn.	19	17	1	-	1	-	3
Kansas City, Kans.	51	29	12	2	2	6	2
Kansas City, Mo.	105	68	25	5	4	3	6
Lincoln, Nebr.	22	19	1	-	1	1	1
Minneapolis, Minn.	67	44	13	3	1	6	-
Omaha, Nebr.	77	49	18	2	2	6	2
St. Louis, Mo.	154	96	33	9	2	14	9
St. Paul, Minn.	63	51	7	2	2	1	4
Wichita, Kans.	82	44	22	3	4	9	-
S. ATLANTIC	1,152	713	249	84	35	68	45
Atlanta, Ga.	139	94	29	7	2	7	6
Baltimore, Md.	153	99	32	9	4	9	2
Charlotte, N.C.	96	60	22	7	-	7	9
Jacksonville, Fla.	106	66	26	8	2	4	2
Miami, Fla.	86	51	21	10	1	3	4
Norfolk, Va.	64	37	16	1	3	7	3
Richmond, Va.	60	42	11	4	1	2	4
Savannah, Ga.	20	13	4	2	1	-	-
St. Petersburg, Fla.	112	91	12	3	1	5	3
Tampa, Fla.	75	36	20	10	6	3	6
Washington, D.C.	187	91	46	19	9	19	3
Wilmington, Del.	54	33	10	4	5	2	3
E.S. CENTRAL	719	458	182	38	20	20	32
Birmingham, Ala.	104	67	26	7	3	1	1
Chattanooga, Tenn.	55	30	17	6	2	-	1
Knoxville, Tenn.	55	41	8	-	4	2	3
Louisville, Ky.	108	76	26	2	1	3	6
Memphis, Tenn.	165	106	46	7	5	-	11
Mobile, Ala.	67	44	13	5	3	2	3
Montgomery, Ala.	55	26	13	4	-	12	1
Nashville, Tenn.	110	68	33	7	2	-	6
W.S. CENTRAL	1,512	876	374	136	81	45	49
Austin, Tex.	45	30	2	6	6	1	3
Baton Rouge, La.	45	35	5	2	2	1	1
Corpus Christi, Tex.	34	17	11	3	1	2	3
Dallas, Tex.	212	126	57	19	8	2	5
El Paso, Tex.	75	49	9	9	4	4	4
Fort Worth, Tex.	77	41	27	3	3	3	3
Houston, Tex.	458	230	122	57	30	19	10
Little Rock, Ark.	72	45	21	4	2	-	4
New Orleans, La.	182	101	54	15	9	3	3
San Antonio, Tex.	138	93	30	5	5	5	4
Shreveport, La.	70	39	14	7	6	4	2
Tulsa, Okla.	104	70	22	6	5	1	7
MOUNTAIN	667	424	133	53	39	17	38
Albuquerque, N.Mex.	93	42	27	6	16	1	3
Colo. Springs, Colo.	34	23	5	6	-	-	4
Denver, Colo.	119	80	19	11	5	4	8
Las Vegas, Nev.	82	44	22	8	7	1	5
Ogden, Utah	23	13	4	3	-	3	3
Phoenix, Ariz.	151	104	30	10	3	4	3
Pueblo, Colo.	15	12	1	2	-	-	3
Salt Lake City, Utah	51	33	7	5	4	2	4
Tucson, Ariz.	99	73	18	2	4	2	5
PACIFIC	2,008	1,322	407	149	67	62	109
Berkeley, Calif.	23	16	4	2	-	1	-
Fresno, Calif.	75	50	18	4	2	1	5
Glendale, Calif.	24	23	1	-	-	-	1
Honolulu, Hawaii	77	42	23	8	2	2	2
Long Beach, Calif.	98	68	21	6	2	1	5
Los Angeles, Calif.	707	451	141	70	26	19	29
Oakland, Calif.	88	63	16	6	1	2	3
Pasadena, Calif.	28	21	2	1	1	3	2
Portland, Oreg.	122	90	13	4	6	8	4
Sacramento, Calif.	82	58	13	6	3	2	6
San Diego, Calif.	165	101	40	10	7	7	25
San Francisco, Calif.	152	102	30	10	5	5	3
San Jose, Calif.	157	96	38	11	6	6	18
Seattle, Wash.	120	76	33	6	4	1	-
Spokane, Wash.	54	39	8	2	1	4	3
Tacoma, Wash.	36	26	6	3	1	-	3
TOTAL	12,217††	7,786	2,781	835	389	420	546

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

Rash Illness Associated with Gypsy Moth Caterpillars — Pennsylvania

Between the end of April and the third week of May 1981, an increase in rash illness was reported by 2 schools in Luzerne County, in northeast Pennsylvania. School A had an enrollment of 320 students, with 135 affected by rashes (an attack rate of 42.2%). School B had 76 out of 300 students affected (an attack rate of 25.3%). The symptoms included pruritic rash and occasional urticaria. Fever, nausea, vomiting, diarrhea, and chills were seldom reported. The rash was generally located on exposed areas of the body—75.4% on arms, 22.8% on the neck, and 21.1% on legs. Rash was less often observed on the back, stomach, face, chest, or hands. The median duration of the rash for school A was 7 days, and for school B, 4 days. All skin scrapings of the rash for bacteria were negative; throat and stool cultures, and tests of acute- and convalescent-phase serum specimens to detect viruses were also negative.

A group of well students from the same schools were selected as controls. All students were interviewed for history of outdoor exposure. Touching caterpillars ($p < 0.01$), working in a garden ($p < 0.05$), and going fishing ($p < 0.01$) were statistically associated with rash illness, whereas a history of allergies was not.

Of the cases with known dates of onset, 27.5% occurred during the first week of May. This period coincides with the first larval instar of gypsy moth caterpillars, which occurs between the first and fourth weeks of May in this area. No new cases were reported after the third week of May. School A is located in a heavily wooded rural area, and school B in a small town with many trees. A distribution map of gypsy moth location indicates highest concentration in the areas in which these schools are located.

The temporal and geographic association between the outbreak of rash illness and the prevalence of gypsy moth larvae suggest a causal relationship may exist.

Reported by R Aber, MD, Hershey Medical Center, T DeMelfi, T Gill, B Healey, MPA, MA McCarthy, RN, N Oswell, W Ruhig, H Speziale, RN, EJ Witte, VMD, State Epidemiologist, Pennsylvania Dept of Health.

Editorial Note: Skin diseases resulting from contact with members of the Order Lepidoptera were described in ancient Greek medical writings. In 1901, several U.S. patients were reported to have experienced dermatitis following contact with *Euproctis chrysorrha* (brown-tailed moth) larvae (*1*). Several outbreaks of dermatitis caused by Lepidoptera have been reported; the largest outbreak involved 600 cases among 6,000 soldiers in Israel (*2,5*). Clinical symptoms and signs are quite variable depending on the type of insect and its stage of development when encountered, the intensity and duration of exposure, the pathogenetic mechanism involved, and the susceptibility of the host. Disease is usually caused by direct contact with the insect or its parts, but indirect contact and airborne transmission have been documented. At least 3 pathogenetic mechanisms have been described: I) intracutaneous injection of toxic substance(s) through hollow appendages (setae) of the insect, 2) direct irritant effects of insect hairs or appendages, and 3) hypersensitivity reaction to insect antigen. A biphasic reaction to skin testing with insect antigens has been described among some patients, which may represent sequential occurrence of 2 or more of these mechanisms (*6*).

The gypsy moth (*Lymantria dispar*) is a serious threat to hardwood trees in the northeastern United States (*7*). It was introduced into the Boston area in 1869 and has been spreading concentrically. Despite heavy infestation in the Northeast, skin diseases have seldom been attributed to the insect except in special laboratories where staff work with the moth and its larvae. No community outbreaks had been reported before 1981, when outbreaks of skin disease attributed to the gypsy moth were reported from Connecticut, Massachusetts (*8*), *Rash Illness – Continued*

Rhode Island (*9*), and Pennsylvania. These outbreaks are believed to have been caused by contact with early larval stages of the moth, which are highly mobile and airborne. It is also possible that the disease is caused by a chemical substance that the larvae acquire during pest control programs. Primary-care physicians and dermatologists should be aware of skin disease resulting from contact with gypsy moth larvae.

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Current Trends

Follow-Up on Pentachlorophenol in Log Homes

The U.S. Environmental Protection Agency (EPA) recently issued a position document proposing regulations to reduce the human-health risks resulting from use of creosote, inorganic arsenic compounds, and pentachlorophenol (PCP or penta) for wood preservation (*1,2*). Evidence cited in support of the proposed regulations included that from studies that showed elevated serum and urine PCP levels among residents of log homes that were treated with 5% PCP in organic solvents (*3*).

For home and farm use of PCP (and creosote), EPA proposes prohibiting indoor application and application to wood that is intended for interior use or for uses that might result in contamination of animals, food, feed, or water. For log houses and buildings, this can be interpreted as a proposed ban on treating logs with PCP before construction (*1*).*

Not all log-home manufacturers pretreat logs with wood preservatives at the factory. Also, many manufacturers have changed from PCP to other wood preservatives (such as copper-8-quinolinolate). To reduce PCP exposure among residents of PCP-treated log homes, CDC has suggested that interior log walls be treated with a sealer such as polyurethane (*3*). Such organic-base sealers have an efficacy of 90%-95% in reducing PCP vaporization under labora-

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*Further information on these wood preservatives and copies of the Position Document can be obtained from the Office of Pesticide Programs, EPA. Address inquiries to Ms. Joan Warshawsky, Section Head, Special Pesticide Review Division, Office of Pesticida Programs, EPA (TS-791), Room 711 B, Crystal Mall II, 1921 Jefferson Davis Highway, Arlington, Virginia 22209 (203-557-7460).

Pentachlorophenol – Continued

tory conditions (*4*). A water-base solution (Permatox Pentite)† intended to reduce PCP vaporization from logs has been developed recently and is being marketed at this time. CDC is currently compiling information on the efficacy of this type of product to reduce PCP exposure among log-home residents.

Reported by P Cammer, Special Pesticide Review Division, Office of Pesticide Programs, Environmental Protection Agency; Chronic Diseases Div, Clinical Laboratory Div, Center for Environmental Health, CDC.

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†Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Erratum, Vol. 31, No. 5

p53. In the article "National Surveillance for Reye Syndrome, 1981: Update, Reye Syndrome and Salicylate Usage" reference 1 should read: CDC. Follow-up on Reye syndrome—United States. MMWR 1980;29:321-2.

Erratum, Vol. 31, No. 10

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The Morbidity and Mortality Weekly Report, circulation 106,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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31/14

CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Chancroid – California

From May 1, 1981, to March 19, 1982, 389 patients with dark-field-negative genital ulcers were seen in the Orange County (California) Special Diseases Clinic (OCSDC). *Haemophilus ducreyi* was identified as the causative organism in this outbreak on December 28, 1981. Since then, cultures from genital lesions obtained from 126 patients have grown *H. ducreyi*. The outbreak of chancroid began in late May 1981 when the number of patients with dark-field-negative genital lesions seen at the OCSDC increased markedly. The peak number of *H. ducreyi*-positive cultures occurred in the week ending January 16, 1982 (Figure 1). Although primary and secondary syphilis and genital herpes infections have been hyperendemic in Orange County, chancroid has never before been documented there at such high levels.

Ninety-one percent of the patients were Hispanic men, many of whom were recent immigrants from Mexico currently living in central Orange County in crowded apartments (5-15 occupants per single housing unit). At least 77% of these men had had recent sexual contact with prostitutes. Examination of 2 prostitutes from that area, who presumably had multiple

FIGURE 1. Cases of chancroid, by week of first clinic visit, Orange County, California, 1981-1982

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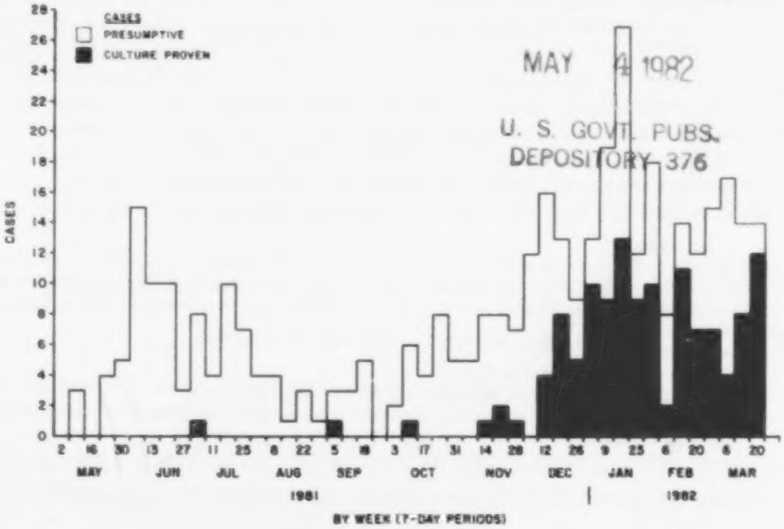

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Chancroid – Continued

contacts with male chancroid patients but for whom no direct contact could be established, showed no lesions. However, when cultures of the cervix, urethra, and vagina were done, *H. ducreyi* was recovered from cervical specimens from both women.

Ninety-five percent of the confirmed or presumptive cases[*] were in men with genital ulcers (ranging from 0.3 cm to 2.5 cm in diameter) and/or enlarged inguinal nodes. The lesions were single or multiple, superficial or deep, sometimes indurated, and often with ragged edges and a purulent base. Tender, unilateral or bilateral inguinal nodes were present in 32% of patients, and in some patients these progressed to the formation of fluctuant buboes.

Dark-field and serologic tests for syphilis, cultures for *Herpes simplex* virus (HSV), and serologic tests for chlamydiae (for diagnosis of lymphogranuloma venereum) have been negative in nearly all instances. However, 2 patients had lesions that were positive for syphilis (*Treponema pallidum* was identified on dark-field examination) and for *H. ducreyi* simultaneously, and 1 patient had a lesion that yielded HSV as well as *H. ducreyi*. In addition, 2 cases of culture-proven chancroid were identified in 1 week at the OCSDC for patients whose lesions were described as "typical herpes," although HSV was not isolated.

Antimicrobial susceptibility tests performed at CDC on 29 isolates of *H. ducreyi* from this outbreak showed resistance to sulfamethoxazole and tetracycline but susceptibility to erythromycin—mean minimum inhibitory concentration (MIC) of ≤0.004 μg/ml—and to trimethoprim/sulfamethoxazole—mean MIC ≤0.06/1.2 μg/ml.

Reported by JR Greenwood, PhD, T Prendergast, MD, LR Ehling, MD, Orange County Health Dept, C Zavala, J Chin, MD, State Epidemiologist, California Dept of Health; Sexually Transmitted Diseases Laboratory Program, Center for Infectious Diseases, Field Svcs Div, Epidemiology Program Office, Venereal Disease Control Div, Center for Prevention Svcs, CDC.

Editorial Note: Chancroid is a sexually transmitted disease that is rarely reported in temperate climates and may be confused with primary syphilis and genital herpes infections. The mean number of cases reported annually in the United States and California from 1974 to 1980 was 697 and 29, respectively (*1,2*).

H. ducreyi is a fastidious, gram-negative bacterium that is difficult to grow in vitro, and may not be detected unless careful collection and isolation techniques are employed. The bacterium requires high humidity and a slightly lower temperature for growth (33 -35 C) than do other bacteria (35 -37 C). Also many strains show variation in nutritional requirements. To obtain optimal recovery, several types of plating media should be used for each culture. The Orange County Public Health Laboratory has achieved the greatest rate of recovery by using enriched chocolate agar, but some strains grow only on Heart Infusion agar supplemented with 10% fetal bovine serum (*3*). Microbiologists may contact the CDC Sexually Transmitted Disease Research Laboratory for additional information on the isolation of *H. ducreyi*.

Considerable variation occurs in antibiotic susceptiblity patterns for *H. ducreyi*, making ob-

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[*] A confirmed case of chancroid was defined by the recovery of *H. ducreyi* from a culture of the genital lesion. A presumptive or suspected case of chancroid was defined by the absence of a positive culture for *H. ducreyi* and of any clinical diagnosis other than chancroid, such as a traumatic tear or folliculitis, plus any of the following:

1. A genital ulcer
    a. negative upon dark-field examination
    b. with accompanying negative serologic test for syphilis (STS)
    c. with no mention of genital herpes in the history, no diagnosis of herpes for this lesion after repeated visits, or no positive culture for *Herpes simplex* virus; or
2. A grossly enlarged, fluctuant, or aspirated inguinal node or bubo in a patient with negative STS results; or
3. A genital ulcer that has not healed after appropriate syphilis treatment, regardless of STS results.

Chancroid – Continued

solete the treatment suggested in most medical textbooks. Resistance of this organism to sulfamethoxazole alone and to tetracycline has been noted in recent years (*4,5*). CDC currently recommends 500 mg erythromycin by mouth 4 times a day for 10 days as the treatment of choice for chancroid. An alternative effective regimen is 800 mg sulfamethoxazole and 160 mg trimethoprim by mouth 2 times a day for 10 days. Recent laboratory testing has shown *H. ducreyi* to be very sensitive to several newer cephalosporin drugs. Research is needed to determine if a single dose of a cephalosporin with a long biologic half-life would be more effective treatment.

Follow-up evaluations should be at no more than 1-week intervals and should continue until the lesions are completely resolved. To prevent transmission of this infection, patients must abstain from sexual activity while clinical disease is present and, because asymptomatic carriage of the organisms is possible, recent sexual partners of patients must be treated with a regimen adequate for uncomplicated chancroid. When chancroid is left untreated, the patient often develops an inguinal bubo that may spontaneously rupture. Necrotic ulcers and erosive lesions that destroy genital tissue have also been reported.

Control strategies in the Orange County outbreak have focused on interviewing persons with confirmed cases for names of sexual partners; this has not successfully identified new cases. During a door-to-door educational campaign in 10 high-risk neighborhoods, no new cases were found. Intensified efforts have been implemented to identify and treat prostitutes.

This outbreak of chancroid is not yet controlled and could spread to other areas, emphasizing the need for prompt diagnosis, treatment, and epidemiologic investigation. Because this disease is uncommon in the United States, current surveillance measures may not be sufficient to detect similar outbreaks should they occur. All sexually-transmitted-disease clinics, private physicians, and other health-care providers should report cases of presumed chancroid to their county or state health departments. The forwarding of isolates of *H. ducreyi* to CDC should be coordinated with state laboratories.

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Current Trends

Influenza Update — United States

Influenza activity caused by type B and type A(H1N1) viruses continued in early April, especially in northern states. According to state reports and isolates from collaborating laboratories, virus activity was at generally low levels.

Alaska, Illinois, Massachusetts, and New Mexico, which had reported influenza type B isolates earlier, recently reported their first influenza type A(H1N1) isolates of the season, and

Influenza – Continued

Delaware, Kansas, Louisiana, Maine, and New Jersey have now reported influenza type B isolates. Two additional reports of outbreaks associated with influenza type B virus in nursing homes have been received. In New Jersey, 2 type B isolates were obtained in a nursing home where 28 of 122 residents had influenza-like illness in the period March 21-April 3. In California, 18 of 46 elderly residents had febrile respiratory illness between mid-February and mid-March, and 3 died. Type B influenza virus was isolated from 1 patient, and high titers to influenza B were detected in convalescent-phase serum specimens from 7 of 9 patients.

Reported by P Gross, MD, B Mojica, MD, W Parkin, DVM, State Epidemiologist, New Jersey State Dept of Health; S Fannin, MD, Los Angeles County, J Chin, MD, State Epidemiologist, California Dept of Health; BJ Francis, MD, State Epidemiologist, Illinois State Dept of Public Health; R Gilfillen, PhD, J Dicinti, NJ Fiumura, MD, State Epidemiologist, Massachusetts Dept of Public Health; L McLaren, PhD, University of New Mexico, Albuquerque, H Hull, MD, J Mann, MD, State Epidemiologist, New Mexico State Health and Environmental Dept; J Jean, PhD, DR Cowan, DDS, MS, State Epidemiologist, Delaware Dept of Health and Social Svcs; R Gohd, PhD, Charity Hospital, New Orleans, C Caraway, DVM, State Epidemiologist, Louisiana State Dept of Health and Human Resources; H Lind, PhD, W Nersesian, MD, Acting State Epidemiologist, Maine State Dept of Human Svcs; D Ritter, MD, J Middaugh, MD, State Epidemiologist, Alaska State Dept of Health and Social Svcs; R Carlson, PhD, DE Wilcox, MD, State Epidemiologist, Kansas State Dept of Health and Environment; Epidemiology Div, US Air Force School of Aerospace Medicine; Influenza Br, Center for Infectious Diseases, CDC.

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		14th WEEK ENDING			CUMULATIVE, FIRST 14 WEEKS		
		April 10 1982	April 11 1981	MEDIAN 1977-1981	April 10 1982	April 11 1981	MEDIAN 1977-1981
Aseptic meningitis		59	58	33	1,017	904	668
Brucellosis		2	4	1	27	23	41
Encephalitis:	Primary (arthropod-borne & unspec.)	9	16	11	104	199	162
	Post-infectious	3	3	4	14	24	43
Gonorrhea:	Civilian	16,924	18,060	18,068	244,504	259,373	252,498
	Military	462	728	547	7,309	7,865	7,324
Hepatitis:	Type A	368	546	552	5,994	6,780	7,342
	Type B	409	402	309	5,220	5,023	4,242
	Non A, Non B	54	N	N	503	N	N
	Unspecified	179	233	191	2,473	2,881	2,748
Legionellosis		8	N	N	72	N	N
Leprosy		9	8	3	47	57	40
Malaria		8	28	12	182	323	134
Measles (rubeola)		33	81	563	264	770	4,479
Meningococcal infections:	Total	73	98	75	943	1,388	953
	Civilian	73	98	73	939	1,385	943
	Military	–	–	–	4	3	9
Mumps		295	85	471	1,999	1,483	5,491
Pertussis		23	28	18	284	285	285
Rubella (German measles)		81	68	394	665	736	3,878
Syphilis (Primary & Secondary):	Civilian	582	630	427	8,895	8,163	6,598
	Military	3	2	4	99	104	85
Tuberculosis		522	519	519	6,543	6,535	7,094
Tularemia		4	3	1	25	27	23
Typhoid fever		1	18	11	99	133	108
Typhus fever, tick-borne (RMSF)		3	5	2	22	19	17
Rabies, animal		132	212	118	1,377	1,022	968

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Calif. 2)	20	Paralytic	1
Cholera	–	Psittacosis (N.J. 2)	22
Congenital rubella syndrome	2	Rabies, human	–
Diphtheria	–	Tetanus (Ark. 1)	12
Leptospirosis (Md. 1, Tex. 1)	17	Trichinosis (Pa. 1, Md. 4)	33
Plague	2	Typhus fever, flea-borne (endemic, murine)	3

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending April 10, 1982 and April 11, 1981 (14th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM 1982	CUM 1982	CUM 1982	CUM 1982	CUM 1981	1982	1982	1982	1982	1982	CUM 1982
UNITED STATES	59	27	184	14	244,504	259,373	368	409	54	179	8	47
NEW ENGLAND	1	-	10	3	5,864	6,380	5	17	3	8	-	1
Maine	-	-	-	-	271	322	-	-	-	-	-	-
N.H.	-	-	-	-	170	230	-	-	1	-	-	-
Vt.	-	-	-	-	124	104	-	-	-	-	-	-
Mass.	1	-	3	-	2,676	2,597	2	6	-	8	-	-
R.I.	-	-	-	-	417	310	2	2	-	-	-	-
Conn.	-	-	7	3	2,206	2,817	1	9	2	-	-	1
MID. ATLANTIC	8	-	24	2	30,140	30,180	47	63	5	17	1	3
Upstate N.Y.	1	-	11	-	4,986	4,774	3	8	1	3	-	-
N.Y. City	-	-	5	-	12,473	11,875	17	20	-	-	-	1
N.J.	1	-	4	-	5,627	6,333	11	19	4	3	1	1
Pa.	6	-	4	2	7,054	7,198	16	16	-	11	-	1
E.N. CENTRAL	8	-	44	4	31,227	41,064	45	35	3	15	5	-
Ohio	3	-	14	2	10,085	14,189	9	9	1	4	5	-
Ind.	1	-	13	2	4,071	3,363	7	5	1	6	-	-
Ill.	-	-	-	-	5,241	11,278	10	3	1	1	-	-
Mich.	2	-	15	-	8,509	8,671	16	16	-	4	-	-
Wis.	2	-	2	-	3,321	3,563	3	2	-	-	-	-
W.N. CENTRAL	4	2	11	-	11,724	12,240	10	16	3	3	1	-
Minn.	-	-	-	-	1,697	1,999	2	4	1	-	-	-
Iowa	1	1	6	-	1,269	1,286	3	2	2	1	1	-
Mo.	1	1	3	-	5,363	5,547	2	2	-	2	-	-
N. Dak.	-	-	-	-	154	165	-	-	-	-	-	-
S. Dak.	-	-	-	-	336	328	-	1	-	-	-	-
Nebr.	-	-	1	-	717	876	1	4	-	-	-	-
Kans.	2	-	1	-	2,188	2,039	2	3	-	-	-	-
S. ATLANTIC	12	10	22	2	62,649	64,656	33	92	11	17	1	3
Del.	-	-	-	-	987	984	1	3	-	-	-	-
Md.	-	-	9	-	8,127	6,829	3	21	1	6	-	1
D.C.	-	-	-	-	3,193	4,270	-	5	-	-	-	-
Va.	3	4	6	-	5,497	6,050	1	7	2	1	1	-
W. Va.	-	-	-	-	727	959	-	-	-	-	-	-
N.C.	4	-	1	-	10,417	10,286	4	1	-	-	-	-
S.C.	-	1	-	-	5,958	5,882	1	18	-	-	-	-
Ga.	-	1	-	-	9,483	12,835	7	16	1	1	-	-
Fla.	5	4	6	2	18,260	16,561	16	21	7	9	-	2
E.S. CENTRAL	2	3	10	1	20,779	21,219	12	29	8	6	-	-
Ky.	-	-	-	-	2,738	2,770	3	3	-	1	-	-
Tenn.	1	1	7	-	7,931	7,697	4	5	2	1	-	-
Ala.	1	1	2	1	6,324	6,912	2	17	6	4	-	-
Miss.	-	1	1	-	3,786	3,840	3	4	-	-	-	-
W.S. CENTRAL	5	5	15	-	35,133	35,717	96	32	3	78	-	3
Ark.	-	2	-	-	2,856	2,350	4	1	1	2	-	-
La.	2	-	2	-	6,295	5,651	7	6	-	13	-	-
Okla.	-	2	6	-	3,712	3,553	17	5	2	4	-	-
Tex.	3	1	7	-	22,270	24,163	68	20	-	59	-	3
MOUNTAIN	-	-	8	1	8,989	10,688	21	12	2	12	-	1
Mont.	-	-	-	-	382	376	2	1	-	-	-	-
Idaho	-	-	-	-	397	416	-	2	-	-	-	1
Wyo.	-	-	-	-	251	232	-	-	-	-	-	-
Colo.	-	-	2	1	2,476	2,736	7	4	-	4	-	-
N. Mex.	-	-	-	-	1,123	1,221	6	-	-	-	-	-
Ariz.	U	-	2	-	2,343	3,490	U	U	U	U	U	-
Utah	-	-	-	-	396	481	2	-	1	6	-	-
Nev.	-	-	4	-	1,621	1,736	4	5	1	2	-	-
PACIFIC	19	7	40	1	37,999	37,249	99	113	16	23	-	36
Wash.	-	-	3	-	3,279	3,519	20	25	9	1	-	2
Oreg.	-	-	-	-	2,150	2,766	7	3	1	-	-	-
Calif.	18	6	35	1	30,951	29,138	71	82	6	21	-	20
Alaska	-	1	2	-	961	1,023	-	-	-	-	-	-
Hawaii	1	-	-	-	658	803	1	3	-	1	-	14
Guam	U	-	-	-	5	39	U	U	U	U	U	-
P.R.	-	-	1	-	750	909	2	3	-	2	-	-
V.I.	U	-	-	-	51	24	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	123	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 10, 1982 and April 11, 1981 (14th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	8	182	33	264	770	73	943	295	1,999	23	81	665	736
NEW ENGLAND	1	15	–	5	26	2	52	3	108	–	–	8	64
Maine	–	–	–	–	2	–	2	1	22	–	–	–	31
N.H.	–	1	–	–	3	–	9	2	11	–	–	8	21
Vt.	–	–	–	2	2	–	3	–	4	–	–	–	–
Mass.	1	10	–	1	15	1	14	–	55	–	–	–	7
R.I.	–	1	–	–	–	1	9	–	7	–	–	–	–
Conn.	–	3	–	2	4	–	15	–	9	–	–	–	5
MID. ATLANTIC	–	16	1	32	269	11	141	10	108	5	11	52	95
Upstate N.Y.	–	2	1	18	157	2	34	5	27	5	6	28	36
N.Y. City	–	7	–	12	26	–	26	2	20	–	4	14	21
N.J.	–	4	–	–	19	3	37	2	22	–	1	10	34
Pa.	–	3	–	2	67	6	44	1	39	–	–	–	4
E.N. CENTRAL	–	12	2	17	44	7	108	175	1,177	12	20	78	154
Ohio	–	2	–	–	13	3	45	131	849	2	–	–	–
Ind.	–	1	–	1	3	–	7	–	19	–	1	9	51
Ill.	–	–	2	8	6	1	22	10	57	6	3	20	42
Mich.	–	8	–	8	22	2	25	34	181	–	14	32	22
Wis.	–	1	–	–	–	1	9	–	71	4	2	17	39
W.N. CENTRAL	2	7	–	1	4	2	41	80	145	3	2	21	35
Minn.	–	–	–	–	1	–	9	72	75	3	1	2	6
Iowa	1	3	–	–	1	–	4	1	19	–	–	–	–
Mo.	–	1	–	1	–	–	15	1	12	–	1	13	1
N. Dak.	–	–	–	–	–	–	4	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	1	–	–	–	–	1	–
Nebr.	1	2	–	–	1	–	3	–	–	–	–	–	1
Kans.	–	1	–	–	1	2	5	6	39	–	–	5	27
S. ATLANTIC	2	34	1	19	214	17	198	9	137	–	1	20	69
Del.	–	–	–	–	–	–	–	–	3	–	–	–	–
Md.	–	6	–	1	1	1	7	1	11	–	1	5	–
D.C.	–	3	–	1	1	–	1	–	–	–	–	–	–
Va.	2	15	–	9	3	3	19	2	19	–	–	9	1
W. Va.	–	–	–	1	7	–	7	1	62	–	–	1	15
N.C.	–	–	–	–	–	1	29	–	4	–	–	–	4
S.C.	–	2	–	–	–	1	25	2	9	–	–	1	4
Ga.	–	2	–	–	75	4	55	–	2	–	–	1	18
Fla.	–	6	1	7	127	7	55	3	27	–	–	3	27
E.S. CENTRAL	–	1	–	5	–	7	61	1	21	–	17	30	15
Ky.	–	1	–	1	–	3	6	1	8	–	2	15	10
Tenn.	–	–	–	4	–	1	25	–	8	–	–	–	5
Ala.	–	–	–	–	–	2	27	–	3	–	–	–	–
Miss.	–	–	–	–	–	1	3	–	2	–	15	15	–
W.S. CENTRAL	–	6	3	29	61	13	135	6	66	–	2	46	47
Ark.	–	–	–	–	–	–	8	–	3	–	–	–	–
La.	–	1	–	–	–	2	19	–	1	–	–	–	6
Okla.	–	–	–	–	3	–	9	–	–	–	1	2	–
Tex.	–	5	3	29	58	11	99	6	62	–	1	44	41
MOUNTAIN	–	3	–	–	12	5	61	2	32	1	1	19	33
Mont.	–	–	–	–	–	1	5	–	3	–	–	1	1
Idaho	–	–	–	–	–	–	4	–	2	–	–	–	2
Wyo.	–	–	–	–	–	–	4	–	2	–	–	4	1
Colo.	–	2	–	–	3	3	23	1	6	1	–	1	16
N. Mex.	–	–	–	–	–	1	9	–	–	–	–	1	2
Ariz.	U	1	U	–	2	U	10	U	10	U	U	4	4
Utah	–	–	–	–	–	–	3	1	7	–	1	6	3
Nev.	–	–	–	–	7	–	3	–	2	–	–	2	4
PACIFIC	3	88	26	156	140	9	146	9	205	2	27	391	224
Wash.	–	7	–	14	1	3	17	3	37	1	1	16	37
Oreg.	–	2	–	–	–	–	26	–	–	–	–	2	31
Calif.	3	77	26	140	139	6	96	6	163	1	25	367	156
Alaska	–	–	–	–	–	–	5	–	4	–	–	1	–
Hawaii	–	2	–	2	–	–	2	–	1	–	1	5	–
Guam	U	–	U	–	4	U	–	U	1	U	U	1	–
P.R.	–	2	1	44	102	–	3	1	15	1	–	3	3
V.I.	U	–	U	–	4	U	–	U	–	U	U	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 10, 1982 and April 11, 1981 (14th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	8,895	8,163	522	6,543	25	1	99	3	22	1,377
NEW ENGLAND	178	187	12	186	-	-	10	-	-	5
Maine	-	1	2	13	-	-	-	-	-	5
N.H.	-	8	2	8	-	-	-	-	-	-
Vt.	-	10	-	6	-	-	2	-	-	-
Mass.	126	110	6	121	-	-	7	-	-	-
R.I.	11	13	1	17	-	-	-	-	-	-
Conn.	41	45	1	21	-	-	1	-	-	-
MID. ATLANTIC	1,186	1,229	117	1,137	2	-	11	-	-	16
Upstate N.Y.	118	99	22	200	2	-	2	-	-	10
N.Y. City	722	775	42	444	-	-	7	-	-	-
N.J.	138	143	19	205	-	-	2	-	-	1
Pa.	208	212	34	288	-	-	-	-	-	5
E.N. CENTRAL	404	562	50	982	-	-	8	-	-	155
Ohio	87	73	5	181	-	-	4	-	-	22
Ind.	62	35	13	134	-	-	-	-	-	26
Ill.	132	322	20	370	-	-	1	-	-	65
Mich.	93	103	12	241	-	-	3	-	-	-
Wis.	30	29	-	56	-	-	-	-	-	42
W.N. CENTRAL	173	142	25	201	6	-	3	-	1	356
Minn.	25	52	5	36	-	-	-	-	-	69
Iowa	7	8	-	29	-	-	1	-	-	113
Mo.	109	71	11	87	5	-	1	-	1	45
N. Dak.	4	1	2	5	-	-	-	-	-	40
S. Dak.	-	-	3	6	-	-	-	-	-	18
Nebr.	5	3	1	7	-	-	-	-	-	36
Kans.	23	7	3	31	1	-	1	-	-	35
S. ATLANTIC	2,472	2,144	116	1,313	6	-	12	1	13	221
Del.	6	5	2	13	-	-	-	-	-	-
Md.	144	170	7	165	1	-	3	1	8	13
D.C.	159	189	4	49	-	-	-	-	-	-
Va.	183	198	15	128	1	-	2	-	-	112
W. Va.	6	6	1	33	-	-	2	-	-	10
N.C.	194	172	19	209	-	-	-	-	4	1
S.C.	118	146	24	138	3	-	2	-	1	15
Ga.	526	548	18	208	-	-	-	-	-	57
Fla.	1,136	710	26	370	1	-	3	-	-	13
E.S. CENTRAL	681	557	42	555	3	-	9	1	5	166
Ky.	33	22	12	140	-	-	-	-	-	31
Tenn.	187	219	14	194	3	-	2	1	1	112
Ala.	232	154	16	174	-	-	6	-	3	23
Miss.	229	162	-	47	-	-	1	-	1	-
W.S. CENTRAL	2,297	1,931	52	696	5	1	5	1	2	243
Ark.	57	36	7	69	4	-	-	-	-	35
La.	476	412	4	127	-	-	-	-	-	7
Okla.	43	49	3	104	1	-	2	1	1	58
Tex.	1,721	1,434	38	396	-	1	3	-	1	143
MOUNTAIN	234	201	8	172	2	-	5	-	-	24
Mont.	1	8	2	16	-	-	-	-	-	13
Idaho	16	2	-	7	1	-	-	-	-	-
Wyo.	9	2	-	2	-	-	-	-	-	2
Colo.	75	69	2	19	-	-	1	-	-	-
N. Mex.	45	39	4	37	-	-	-	-	-	3
Ariz.	46	44	U	68	-	U	3	U	-	6
Utah	7	3	-	6	1	-	1	-	-	-
Nev.	35	34	-	17	-	-	-	-	-	-
PACIFIC	1,270	1,210	100	1,301	1	-	36	-	1	191
Wash.	41	43	7	79	1	-	-	-	-	-
Oreg.	37	26	6	49	-	-	1	-	-	-
Calif.	1,159	1,111	82	1,077	-	-	34	-	1	137
Alaska	6	4	-	18	-	-	-	-	-	54
Hawaii	27	26	5	78	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	165	201	-	57	-	-	-	-	-	13
V.I.	-	-	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending April 10, 1982 (14th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	624	437	135	20	16	12	48
Boston, Mass.	188	119	48	10	5	6	19
Bridgeport, Conn.	36	25	9	2	-	-	5
Cambridge, Mass.	21	16	5	-	-	-	3
Fall River, Mass.	36	28	7	1	-	-	-
Hartford, Conn.	47	35	7	2	1	2	1
Lowell, Mass.	32	24	6	-	2	-	1
Lynn, Mass.	24	17	6	-	-	1	3
New Bedford, Mass.	23	23	-	-	-	-	2
New Haven, Conn.	43	33	7	-	2	1	2
Providence, R.I.	57	37	16	1	2	1	5
Somerville, Mass.	6	5	1	-	-	-	-
Springfield, Mass.	44	30	8	2	3	1	2
Waterbury, Conn.	21	15	6	-	-	-	2
Worcester, Mass.	46	30	13	2	1	-	3
MID. ATLANTIC	2,681	1,804	585	166	68	63	97
Albany, N.Y.	58	40	16	-	-	2	2
Allentown, Pa.	16	13	3	-	-	-	1
Buffalo, N.Y.§	150	139	1	1	4	2	7
Camden, N.J.	36	25	7	1	-	3	1
Elizabeth, N.J.	32	24	2	5	1	-	1
Erie, Pa.†	41	30	6	4	-	1	1
Jersey City, N.J.	43	31	9	2	-	1	2
N.Y. City, N.Y.	1,532	1,006	341	107	39	39	50
Newark, N.J.	52	23	14	6	5	4	2
Paterson, N.J.	18	10	4	2	1	1	-
Philadelphia, Pa.†	283	191	60	14	8	4	10
Pittsburgh, Pa.†	49	28	18	1	1	1	2
Reading, Pa.	29	19	10	-	-	-	3
Rochester, N.Y.	127	94	24	6	2	1	6
Schenectady, N.Y.	19	12	4	1	2	-	1
Scranton, Pa.†	30	20	8	2	-	-	2
Syracuse, N.Y.	93	46	30	7	6	4	2
Trenton, N.J.	27	16	9	2	-	-	-
Utica, N.Y.	21	15	6	-	-	-	-
Yonkers, N.Y.	25	14	5	5	1	-	4
E.N. CENTRAL	2,105	1,308	534	120	75	68	78
Akron, Ohio	41	26	9	4	-	2	-
Canton, Ohio	37	21	12	1	3	-	1
Chicago, Ill.	533	319	142	38	18	16	14
Cincinnati, Ohio	179	115	46	4	9	5	19
Cleveland, Ohio	117	74	33	5	2	3	1
Columbus, Ohio	132	78	41	5	1	7	2
Dayton, Ohio	92	57	22	8	1	4	2
Detroit, Mich.	281	164	70	24	16	7	16
Evansville, Ind.	35	24	7	1	-	3	1
Fort Wayne, Ind.	37	25	10	-	2	-	2
Gary, Ind.	22	10	5	4	1	2	-
Grand Rapids, Mich.	54	33	14	2	2	3	3
Indianapolis, Ind.	141	80	45	6	5	5	2
Madison, Wis.	54	35	14	1	3	1	4
Milwaukee, Wis.	116	81	22	5	4	4	-
Peoria, Ill.	46	33	6	5	-	2	5
Rockford, Ill.	43	31	9	-	3	-	1
South Bend, Ind.	45	33	5	5	1	1	4
Toledo, Ohio	47	34	10	1	1	1	1
Youngstown, Ohio	53	35	12	1	3	2	-
W.N. CENTRAL	723	484	152	35	24	28	35
Des Moines, Iowa	52	38	9	2	2	1	5
Duluth, Minn.	29	23	3	2	1	-	2
Kansas City, Kans.	40	23	9	4	3	1	1
Kansas City, Mo.	116	69	28	10	2	7	8
Lincoln, Nebr.	35	29	4	1	1	-	5
Minneapolis, Minn.	80	54	16	3	3	4	2
Omaha, Nebr.	97	61	24	3	4	5	-
St. Louis, Mo.	125	83	30	4	4	4	6
St. Paul, Minn.	82	64	10	3	2	3	1
Wichita, Kans.	67	40	19	3	2	3	5
S. ATLANTIC	1,371	852	324	107	44	40	47
Atlanta, Ga.	137	79	30	19	7	2	3
Baltimore, Md.	371	239	87	21	14	9	6
Charlotte, N.C.	73	53	14	4	1	1	4
Jacksonville, Fla.	115	69	24	11	5	6	-
Miami, Fla.	135	75	40	15	1	4	2
Norfolk, Va.	57	37	12	1	4	2	7
Richmond, Va.	69	38	21	5	3	2	6
Savannah, Ga.	33	18	13	1	1	-	3
St. Petersburg, Fla.	87	71	12	2	1	1	5
Tampa, Fla.	78	50	18	7	1	2	4
Washington, D.C.	164	91	44	14	5	7	6
Wilmington, Del.	52	32	9	5	1	4	1
E.S. CENTRAL	665	425	158	32	24	25	31
Birmingham, Ala.	111	69	21	9	5	7	2
Chattanooga, Tenn.	49	27	19	2	1	-	2
Knoxville, Tenn.	45	32	10	1	2	-	1
Louisville, Ky.	115	76	26	5	3	4	8
Memphis, Tenn.	145	90	39	5	4	7	8
Mobile, Ala.	70	42	17	2	5	4	5
Montgomery, Ala.	41	29	6	2	2	2	1
Nashville, Tenn.	89	60	20	6	2	1	4
W.S. CENTRAL	1,416	813	382	118	62	40	42
Austin, Tex.	62	40	19	1	-	2	5
Baton Rouge, La.	23	15	6	1	-	-	-
Corpus Christi, Tex.	49	25	11	3	3	7	-
Dallas, Tex.	161	106	35	16	3	1	1
El Paso, Tex.	37	26	9	-	2	-	6
Fort Worth, Tex.	111	63	35	8	2	3	4
Houston, Tex.	483	232	135	58	39	19	10
Little Rock, Ark.	70	45	16	3	2	4	1
New Orleans, La.	143	90	36	10	5	2	2
San Antonio, Tex.	166	108	42	11	4	1	7
Shreveport, La.	45	21	21	1	1	1	-
Tulsa, Okla.	66	42	17	6	1	-	6
MOUNTAIN	633	399	148	35	19	28	28
Albuquerque, N.Mex.	54	34	8	6	3	3	3
Colo. Springs, Colo.	36	23	11	-	-	2	5
Denver, Colo.	131	94	30	4	2	1	3
Las Vegas, Nev.	66	35	23	3	5	-	2
Ogden, Utah	11	10	1	-	-	-	1
Phoenix, Ariz.	160	104	27	15	4	10	4
Pueblo, Colo.	28	18	7	2	1	-	5
Salt Lake City, Utah	53	26	14	5	2	6	1
Tucson, Ariz.	94	55	27	4	2	6	4
PACIFIC	1,780	1,170	387	116	50	68	102
Berkeley, Calif.	14	14	-	-	-	-	1
Fresno, Calif.	69	45	12	4	5	3	5
Glendale, Calif.	18	17	-	-	1	-	2
Honolulu, Hawaii	54	27	18	3	3	3	1
Long Beach, Calif.	94	58	23	8	2	3	5
Los Angeles, Calif.	541	371	111	36	10	12	28
Oakland, Calif.	93	61	20	8	1	3	5
Pasadena, Calif.	26	24	2	-	-	-	6
Portland, Oreg.	124	79	27	11	3	4	5
Sacramento, Calif.	83	53	20	2	4	4	7
San Diego, Calif.	63	41	18	1	1	2	6
San Francisco, Calif.	170	115	25	13	3	14	6
San Jose, Calif.	182	118	37	13	7	7	15
Seattle, Wash.	117	69	28	5	7	8	5
Spokane, Wash.	47	23	15	6	2	1	5
Tacoma, Wash.	65	43	11	6	1	4	-
TOTAL	12,036††	7,700	2,785	753	382	372	508

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality November 1981		Estimated number of physician contacts November 1981[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	157,250	831.1	84,699,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	7,970	42.1	5,377,000
Malignant neoplasms (140-208)	1,804,120	33,220	175.6	1,983,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	59,690	315.5	5,133,000
Suicides, homicides (E950-E978)	1,401,880	4,280	22.6	–
Chronic liver disease and cirrhosis (571)	301,070	2,310	12.2	128,000
Cerebrovascular diseases (430-438)	280,430	13,110	69.3	453,000
Pneumonia and influenza (480-487)	124,830	3,840	20.3	955,000
Diabetes mellitus (250)	117,340	2,590	13.7	2,203,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	4,410	23.3	1,462,000
Prenatal care[5]				2,023,000
Infant mortality[5]		3,500	11.9/1000 live births	

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[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the midpoint of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 30, No. 12, March 18, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 30, No. 11, February 10, 1982, p. 1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 30, No. 12, March 18, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, November, 1981, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2100) who record all private patient contacts for 2 consecutive days each quarter.

[5] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 30, No. 11, February 10, 1982, p. 1) are included in the table because "Years of potential life lost" does not reflect deaths of children <1 year.

Epidemiologic Notes and Reports

Measles — El Paso, Texas, 1981

In the period March-June 1981, 219 cases of measles were reported by the El Paso (Texas) City-County Health Department. All patients had a temperature of at least 101 F (38.3 C), a rash of at least 3 days' duration, and at least 1 of the following: cough, coryza, conjunctivitis, or Koplik's spots. Twelve cases were confirmed by a 4-fold rise in complement fixation (11) or hemagglutination inhibition (1) antibody titers between acute- and convalescent-phase serum specimens.

Rash onset occurred between April 11 and May 8 in 154 (70.3%) of the cases. Patients ranged in age from 3 months to 36 years. The largest number of cases, 81 (37.0%), occurred among 15-19 year olds followed by 67 among 0-4 year olds (Table 1). Of these 67 preschool patients, only 9 (13.4%) attended day-care centers.

Of the 219 patients, 94 (42.9%) had histories of adequate measles vaccination*; 85 (38.8%) had no history of prior vaccination; and 37 (16.7%) had histories of inadequate vaccination. The vaccination status was unknown for 3 patients.

Five of the 9 El Paso County public school districts were involved in the outbreak. The highest attack rate, 2.3 cases/1,000 enrollees, occurred in the Ysleta Independent School District, where 63 of the 100 cases reported occurred in a single high school (Figure 2). On April 28, 776 (34.3%) of the 2,265 students at that high school were identified as being susceptible, and a special clinic was conducted at the school on the morning of April 29. Only 6 cases were reported after the clinic date, and no cases were reported 14 days or more (1 incubation period) after the measles vaccination clinic.

On April 29, the El Paso City-County Health Director formally declared an epidemic. All schoolchildren in the county were required to show proof of adequate measles vaccination or physician-verified measles illness. Over 120,000 school records were screened in public, private, and parochial schools. The majority of schools excluded students who were unvaccinated. Because of staff limitations, the health department elected to conduct vaccination clinics only at those public schools with at least 300 susceptible students. Special clinics were conducted at 14 of the county's 23 high schools, and, at the same time, regular clinic services and immunization services were maintained for the entire day in the public health clinics.

During the control program, 13,000 persons were vaccinated for measles by the El Paso City-County Health Department, an increase of 502% over the same period in 1980. In addition, the Texas Department of Health issued more than 7,000 doses of measles vaccine to private physicians, hospitals, and out-patient clinics in the El Paso area.

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*Defined by the health department as vaccine administered after 12 months of age and after January 1968.

TABLE 1. Reported cases of measles and attack rates, by age group, El Paso County, Texas, March-June 1981

Age Group (years)	Number of Cases	Percentage of Total	Attack Rate/100,000
≤4	67	30.6	159.3
5-9	30	13.7	72.9
10-14	29	13.2	67.7
15-19	81	37.0	171.0
≥20	12	5.5	4.4
TOTAL	219	100.0	49.4

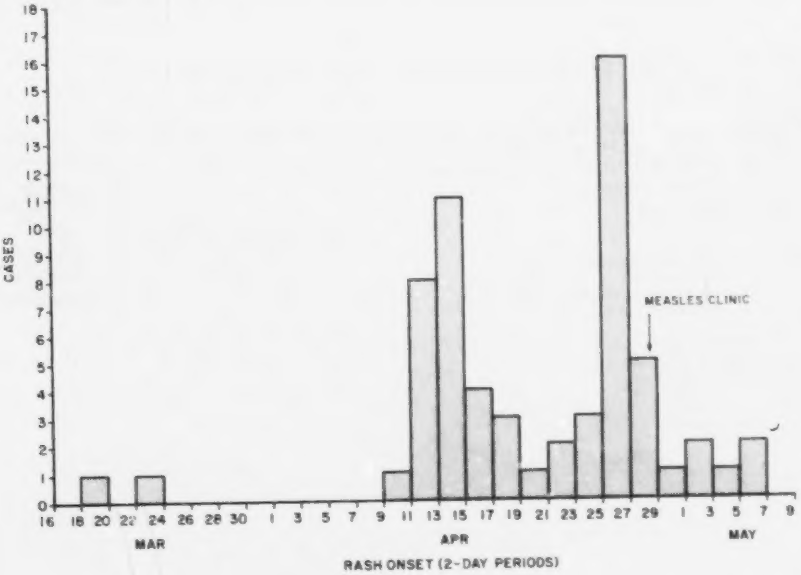
Measles – Continued

Reported by BF Rosenblum, MD, MPH, EW Gorby, MD, E Orneles, S Balcorta, El Paso City-Couty Health Dept, JL Bradley, MD, Public Health Region III, RD Crider, Jr, C Mallory, CR Webb, Jr, MD, State Epidemiologist, Texas Dept of Health; Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: Texas school immunization laws, rules, and regulations (as amended in 1978) provided for a graduated implementation of requirements for measles vaccination. For the school year 1980-1981, only students through the 7th grade (13 years of age) were required to show proof of measles protection. The lack of such regulations for middle and high school students probably explains the high attack rate in El Paso County in persons 15-19 years of age.

Based on experience in the El Paso outbreak, school regulations for the state of Texas were revised so that, effective September 1, 1981, a history of physician-verified measles or a history of adequate vaccination for measles would be required for all students to attend school, including high school. In May 1981, it was estimated that approximately 290,000 students in public junior and senior high schools would need measles vaccination as a result of the rule changes. From September 1 to November 30, 1981, a statewide record review of all junior and senior high school students was conducted, and from August 1 through November 30, 1981, 112,696 doses of measles vaccine were administered through public health clinics to students 10-19 years of age, an increase of 646% over the same period in 1980. It is now estimated that 98.3% of the 2,919,150 students currently enrolled in the 1,098 school districts in Texas from kindergarten through grade 12 are in compliance with the new state immunization requirements.

FIGURE 2. Reported measles cases in a high school, by date of rash onset, El Paso, Texas, March-May 1981



Measles – Continued

The cornerstone of the measles elimination effort is the achievement and maintenance of high immunization levels, and school requirements for all children from kindergarten through 12th grade are fundamental for success (*1*). Past studies have demonstrated that states with such regulations have the lowest incidence rates for measles (*2-4*) and that enforcement of these regulations with exclusion of non-compliant students correlates best with low measles incidence (*3*).

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Notice to Readers

Malaria Supplement Available

A supplement to the Morbidity and Mortality Weekly Report, entitled **Prevention of Malaria in Travelers — 1982**, is available upon written request. Please send requests to: Malaria Branch, Parasitic Diseases Division, Centers for Disease Control, Atlanta, Georgia 30333.

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Current Trends

New Issues in Newborn Screening for Phenylketonuria and Congenital Hypothyroidism: A Commentary from the Committee on Genetics of the American Academy of Pediatrics

The following policy statement was developed by the American Academy of Pediatrics Committee on Genetics and published in Pediatrics 1982;69:104-6. CDC believes that it is an excellent statement of public health policy regarding newborn screening of phenylketonuria and congenital hypothyroidism and concurs with its recommendations.

Screening for phenylketonuria (PKU) and congenital hypothyroidism (CH) is of concern to parents, physicians, and public health professionals. Parents have an abiding interest in a predictive activity that can prevent disease in their offspring. Physicians and their consultants must counsel parents and interpret a positive screening test. Public health personnel are concerned with the specificity and sensitivity, efficiency, and effectiveness of newborn screening.

The Committee on Genetics has previously published recommendations on newborn screening for PKU and CH (*1*). Further recommendations are required because PKU and CH screening are widely practiced joint procedures in the newborn and because most full-term newborn infants are now being discharged from North American nurseries within the first 3 days after birth. This new practice is likely to have an effect on the validity of newborn screening and on screening for PKU, in particular.

A recent statement from the Committee on Fetus and Newborn (Pediatrics 65:651, 1980) addressed the problem of so-called "in and out deliveries." However, the statement was ambiguous on the issue of whether such infants should be screened routinely at the initial discharge from the nursery. The Committee on Genetics believes that all infants, regardless of age, should be screened for PKU and CH at discharge from the nursery.

The Committee believes that screening is not the equivalent of diagnosis; some cases of PKU and CH will inevitably be missed by screening. Whereas an important reason for missed cases may be the biology of the target disorders, none should slip through the screening mesh because of flaws in the program and its components. Accordingly, we have examined the allied problems of initial screening and rescreening at a later age, in relation to early discharge from the nursery and our previous recommendations (*1*). The new statement emphasizes 4 issues; 1) organization of newborn screening programs for PKU and CH; 2) biologic adequacy of the blood sample and how it may influence the rate of false-negative results, and the need for routine rescreening; 3) performance of the screening method and how it may influence the frequency of false-negative test results; and 4) disorders of tetrahydrobiopterin homeostasis and their significance for diagnosis and treatment of infants with positive PKU tests.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

HE 20.7009:

RECOMMENDATIONS

1. An adequate screening PROGRAM for the persistent hyperphenylaninemias (PHP), including PKU, and for CH (in its various forms) should assure: a) total participation by the eligible population; b) notification of parents about newborn screening and their participation in this activity; c) reliable and prompt performance of the screening test; d) prompt follow-up of subjects with positive tests; e) accurate diagnosis of subjects with confirmed positive tests; f) appropriate counseling and treatment of patients.

2. A blood SAMPLE should be obtained from every infant before he/she leaves the nursery, regardless of age.* Siblings of children with PKU/PHP and CH deserve special priority for collection of the sample. An adequate sample is defined as follows: a) for PKU/PHP, it is heel blood obtained as close as possible to time of discharge from the nursery in a full-term infant (cord blood is not sufficient); b) for CH, it is cord blood at birth or heel blood at discharge; c) in a premature infant, for any infant receiving parenteral feeding, or any newborn infant being treated for illness, it is a blood sample obtained at or near the seventh day of age.

3. Infants initially screened before 24 hours of age should be rescreened for PKU/PHP because the probability of missing cases by the initial screening test is greatly increased. The repeat screening test should be completed before the third week of life.

4. Accurate ANALYSIS requires meticulous standardization of the screening method. Accuracy is improved when the cutoff level delineating an abnormal result is defined and specificity of the test is monitored regularly; to do so requires a high volume of samples per unit time. This analytical component in the program should be centralized to enhance ongoing evaluation of efficiency, accuracy, participation, and adequacy of samples.

5. All patients with persistent hyperphenylalaninemia should be investigated to rule out the tetrahydrobiopterin-deficient forms of PKU.

6. Systematic follow-up of infants with positive CH screening tests is necessary to evaluate the efficacy of CH prevention.

COMMENTARY

1. Phenylketonuria and Other Forms of Persistent Hyperphenylalaninemia Associated with Disease.

Early diagnosis and treatment largely prevent the mental retardation associated with untreated PKU, and a properly executed program is clearly cost effective (*2*). PREVENTION requires an adequate PROGRAM, a satisfactory SAMPLE for the screening test, and reliable ANALYSIS of the sample.

1.1. The Program. Programs that reach every infant, perform the test reliably, provide timely follow-up of subjects with positive tests, assure accurate diagnosis, and provide appropriate counseling and treatment conform to published guidelines (*1,3*). Programs lacking any of these components cannot be recommended. Missed cases of PKU/PHP in screening programs may reflect faults of program organization, in particular, failure to obtain the blood sample or to perform a reliable analysis. On the other hand, cases can be missed because of biologic variation in the expression of hyperphenylalaninemia and are not necessarily the result of negligence in screening.

1.2. The Sample. Cases of PKU have been missed because the level of blood phenylalanine was not elevated above normal, even after the third day of life (B. Wilcken et al., personal communications, 1981). In general, however, the chance of false-negative test results for PKU and other forms of PHP is greater when the blood sample is obtained before 72 hours of age. This statement is based on the following evidence (*4-8*). 1) Serial measurements in PKU infants during the first 3 days of life show that blood phenylalanine concentrations <4 mg/100 ml are more likely to occur in this period than after 72 hours of age; 2) The incidence of false-negative test results in PKU (either actual or predicted on statistical grounds) is higher in the first 3 days of life than in older infants.

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*This recommendation pertains to North American perinatal practices. In countries where there is a systematic home visit following early discharge or home delivery, it is appropriate to screen all babies on a sample drawn at home in the first week by the health visitor.

Extrapolations from available data suggest that 16.1% of PKU cases could be missed on the first day (1 to 24 hours) of life because the screened blood sample contained <4 mg of phenylalanine/100 ml; 2.2% of cases could be missed when screening is done on the second day (25 to 48 hours); and 0.3% on the third day (49 to 72 hours) of life. However, these are only statistical estimates of the frequency of missed cases. They are based on the distribution of blood phenylalanine in the PKU and non-PKU populations during the first 3 days of life where skewness and other factors in the variance contribute to the probability statements. An evaluation of routine repeat blood screening (*9*) indicated that routine follow-up blood testing of infants for PKU was not productive.

It is now firmly established (*7,8,10*) that cord blood cannot be used for PKU/PHP screening. Whether or not feeding practices influence the accuracy of screening in the first 3 days of life remains uncertain; it is the opinion of the Committee that this factor is of only minor importance, and the Recommendations should be followed regardless of the feeding protocol.

1.3. The Analytical Method. Accurate analysis of the sample is a critical facet of prevention. The Guthrie test is a threshold (cutoff) method that estimates phenylalanine concentration above a certain level in the blood sample. Quantitative methods permit the age-specific distribution of phenylalanine to be described and the corresponding cutoff level to be defined statistically. In practice, either method has predictive validity for PKU screening.

1.4. Tetrahydrobiopterin-deficient PKU. Infants with disorders of tetrahydrobiopterin homeostasis are likely to experience progressive neurologic deterioration when treated with low-phenylalanine diet alone (*2,11,12*). Current estimates indicate that 0.5% to 3% of infants with persistent hyperphenylalaninemia have a disorder of tetrahydrobiopterin metabolism. Their prognosis is quite different from that for infants with benign PHP or typical PKU treated and counseled in the conventional manner. Accordingly, prognosis for any patient with persistent hyperphenylalaninemia must be guarded, until experience with early diagnosis and treatment of tetrahydrobiopterin-deficient hyperphenylalaninemia has been accumulated and evaluated. Prompt consultation with the appropriate regional center for further investigation is recommended for all cases of PKU with persistent hyperphenylalaninemia.

1.5. Rescreening. Whereas the ideal screening program achieves perfect specificity (no false-positive tests) and perfect sensitivity (no false-negative tests), in practice this is seldom attained. Errors of classification do occur in the real world. It is our belief that errors should not occur because of organizational and technical flaws in the screening program. Yet, the Committee recognizes the fact of biologic variability when PKU/PHP screening is done before 24 hours of age; accordingly, routine rescreening of these infants is recommended.

1.6. Maternal PKU and PHP. Exposure to unmodified maternal PHP, in any of its forms, constitutes a risk to the fetus (*13*). Current screening programs for PKU/PHP should consider their responsibility for long-term follow-up of female patients so that physicians can initiate appropriate counseling in due course (*14*).

2. Congenital Hypothyroidism

All foregoing statements about adequacy of PROGRAM, SAMPLE, and ANALYSIS pertain

Phenylketonuria and Congenital Hypothyroidism — Continued

equally to CH screening. The Committee cannot document other issues of CH screening with an authority comparable to that associated with PKU screening because the former is still an ongoing development. Proceedings of an international conference on CH screening (*15*) are available for guidance.

Effective approaches to CH screening include thyroxine (T_4) and thyroid-stimulating hormone (TSH) measurements on all samples, TSH measurements alone, and T_4 with supplemental TSH measurement. Cord blood and heel blood have both been used effectively. Rapidly changing technology makes overcommitment to any particular sample protocol or laboratory analysis unwise at present (*16*). Two general comments are pertinent to programs utilizing a primary T_4 measurement: 1) The risk of a false-negative test result in CH screening is increased when infants with incomplete absence of thyroid tissue are screened by the T_4 assay alone; 2) Rescreening with combined T_4 and TSH measurements is always recommended when the initial T_4 value is abnormally low.

All infants classified as CH should be treated and systematically reevaluated to determine whether the initial condition was transient.

Reported by Committee on Genetics, 1980-1981, CR Scriver, MD, Chairman, NA Holtz, MD, RR Howell, MD, P Mamunes, MD, HL Nadler, MD, AF Manley, MD, G Oakley, MD, JL Simpson, MD, Liaison Representatives.

Editorial Note: Early diagnosis, coupled with optimal therapy and timely follow-up of newborns with PKU and CH, has been shown to be effective in preventing mental retardation and other adverse clinical sequelae normally associated with the untreated states of these disorders. A study of children with PKU treated from birth to 6 years of age showed a strong positive correlation between adherence to treatment and IQ scores (*16*). Similarly, IQ testing performed in a group of infants with CH detected through neonatal screening and treated before clinical manifestations were apparent (*17*) showed that prompt treatment was highly correlated with final IQ scores.

In the United States approximately 300 infants are born with PKU each year. Almost all of these infants would be severely retarded if untreated. A recent study suggested that for 10%-15% (*9*) of infants born with PKU, the condition may remain undetected because of possible failures in specimen collection, laboratory/administrative errors, lack of centralized programs, and poor quality control in general. Similar factors are likely to produce errors in CH diagnosis also. There is no active, systematic surveillance or registry for detected and missed cases of these conditions. The exact number of missed cases and the reasons for their being missed are, therefore, unknown. The lack of these data hampers health officials in their attempts to make sure mental retardation due to PKU and CH is reduced to zero. Until such data are available, the recommendations of the American Academy of Pediatrics should serve as a guide toward the goal of eliminating mental retardation from these 2 preventable causes.

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Influenza Update — United States

ANTIGENIC ANALYSIS OF INFLUENZA A(H3N2) ISOLATES

Influenza A(H3N2) viruses isolated during early March 1982 in association with sporadic cases in Texas and Florida (*1*) have been shown by hemagglutination-inhibition tests to resemble most closely A/Bangkok/2/79. A previously unreported H3N2 isolate collected from Houston in January by the Influenza Research Center at Baylor University, as well as an isolate recovered in Spain during September 1981 from a US Air Force person with illness, have also been found to resemble A/Bangkok/2/79.

Reported by WHO Collaborating Center for Influenza, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: A/Bangkok/2/79 was originally identified simultaneously with A/Bangkok/1/79, from which it shows recognizable antigenic variation (*2*). Since that time, A/Bangkok/2/79-like virus has been detected occasionally in parallel with other H3N2 variants, of which the majority have usually more closely resembled A/Bangkok/1/79. It is unusual to detect A/Bangkok/2/79-like strains in the absence of the other recent H3N2 variants. However, it would be premature, because of the small number of H3N2 isolates from the US population this year, and the presence of different variants in other populations, to attach predictive significance to the recent identification of sporadic A/Bangkok/2/79-like virus isolates from US citizens.

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Influenza – Continued

INFLUENZA VACCINE EFFICACY IN NURSING HOME OUTBREAKS REPORTED DURING 1981-1982

Four outbreaks of influenza-like illness in nursing homes, from which influenza type B virus was isolated and serologic evidence of influenza B infection was obtained, have been reported to CDC this winter (*1-3*). In all of these nursing homes the residents were elderly, with an average age in excess of 80 years. Three of the homes had resident populations of about 120 persons, but 1 institution had just over 40 residents.

Clinical attack rates for influenza averaged 27% (range 25% to 38%), and the duration of the outbreaks averaged 2 weeks (range 1-4 weeks). The percentage of recently vaccinated residents ranged from less than 10% to almost 90%. In 2 of the nursing homes, there were relatively equal numbers of vaccinated and unvaccinated residents. Laboratory diagnosis confirmed influenza B infections for 21 of 34 (62%) and 7 of 13 (54%) of ill residents from whom specimens were collected in these 2 homes, and the calculated rates of vaccine efficacy in preventing clinical influenza illness were 37% and 25%. Mortality associated with influenza-like illness among vaccinated and unvaccinated persons during the 4 outbreaks reported this winter led to an overall case-fatality ratio of 10%, but the total sample size was such that meaningful analysis of vaccine efficacy in reducing mortality was not feasible.

Reported by Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

(Continued on page 195)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		16th WEEK ENDING			CUMULATIVE, FIRST 16 WEEKS		
		April 17 1982	April 18 1981	MEDIAN 1977-1981	April 17 1982	April 18 1981	MEDIAN 1977-1981
Aseptic meningitis		60	58	47	1,076	962	713
Brucellosis		4	2	1	31	25	42
Encephalitis:	Primary (arthropod-borne & unspec.)	18	10	9	202	209	174
	Post-infectious	1	2	2	15	26	45
Gonorrhea:	Civilian	15,081	18,779	17,540	261,245	278,152	270,038
	Military	256	566	518	7,567	8,431	7,724
Hepatitis:	Type A	378	487	545	6,404	7,267	7,947
	Type B	402	372	314	5,644	5,395	4,616
	Non A, Non B	43	N	N	546	N	N
	Unspecified	141	186	186	2,624	3,067	2,948
Legionellosis		14	N	N	86	N	N
Leprosy		7	–	2	54	57	46
Malaria		22	30	11	202	353	139
Measles (rubeola)		82	60	640	334	830	4,937
Meningococcal infections:	Total	81	68	68	1,027	1,456	1,021
	Civilian	81	67	67	1,023	1,452	1,011
	Military	–	1	–	4	4	9
Mumps		137	111	506	2,139	1,594	6,011
Pertussis		23	18	18	311	303	303
Rubella (German measles)		75	66	623	739	802	4,510
Syphilis (Primary & Secondary):	Civilian	536	612	434	9,499	8,775	6,991
	Military	17	4	6	116	108	92
Tuberculosis		504	624	556	7,014	7,159	7,620
Tularemia		2	2	3	27	29	25
Typhoid fever		10	9	8	109	142	114
Typhus fever, tick-borne (RMSF)		5	3	3	27	22	22
Rabies, animal		165	199	142	1,545	2,021	1,110

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism	20	Paralytic	1
Cholera	–	Psittacosis (Calif. 1)	23
Congenital rubella syndrome (Ill. 1)	3	Rabies, human	–
Diphtheria	–	Tetanus (La. 1)	13
Leptospirosis (La. 1)	18	Trichinosis (Calif. 1)	34
Plague	2	Typhus fever, flea-borne (endemic, murine) (Miss. 1, Tex. 1)	5

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending April 17, 1982 and April 18, 1981 (15th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	63	31	232	15	261,245	278,152	378	432	41	141	14	59
NEW ENGLAND	1	-	10	3	6,275	6,682	5	17	2	13	9	1
Maine	-	-	-	-	303	356	-	1	-	-	-	-
N.H.	-	-	-	-	184	239	-	-	-	1	6	-
Vt.	-	-	-	-	135	110	1	-	-	-	-	-
Mass.	-	-	3	-	2,892	2,695	1	4	-	7	-	-
R.I.	-	-	-	-	439	325	1	-	-	-	-	-
Conn.	1	-	7	3	2,322	2,957	2	12	2	2	1	1
MID. ATLANTIC	4	-	25	2	32,136	31,937	38	67	5	15	-	3
Upstate N.Y.	2	-	12	-	5,243	5,076	11	28	1	5	-	-
N.Y. City	1	-	5	-	13,623	12,675	12	12	-	2	-	1
N.J.	-	-	4	-	5,732	6,556	15	27	4	8	-	1
Pa.	1	-	4	2	7,538	7,630	U	U	U	U	-	1
E.N. CENTRAL	6	-	46	4	34,419	44,493	58	56	3	12	1	1
Ohio	2	-	15	2	10,716	16,122	16	14	2	4	1	1
Ind.	3	-	13	2	4,156	3,920	17	19	1	8	-	-
Ill.	-	-	-	-	6,953	11,026	10	6	-	-	-	-
Mich.	1	-	16	-	9,005	9,193	11	14	-	-	-	-
Wis.	-	-	2	-	3,589	3,835	4	3	-	-	-	-
W.N. CENTRAL	-	2	11	-	12,396	13,163	14	13	2	4	1	-
Minn.	-	-	-	-	1,767	2,117	2	4	1	-	-	-
Iowa	-	1	6	-	1,369	1,349	5	3	-	-	-	-
Mo.	-	1	3	-	5,696	5,963	4	6	1	4	1	-
N. Dak.	-	-	-	-	172	178	-	-	-	-	-	-
S. Dak.	-	-	-	-	359	348	1	-	-	-	-	-
Nebr.	-	-	1	-	769	469	2	-	-	-	-	-
Kans.	-	-	1	-	2,264	2,239	-	-	-	-	-	-
S. ATLANTIC	22	11	26	3	66,262	69,291	41	93	11	24	2	4
Del.	-	-	-	-	1,057	1,030	1	-	-	1	-	-
Md.	-	-	9	-	8,744	7,610	4	13	3	2	1	2
D.C.	-	-	-	-	3,458	4,495	1	4	-	-	-	-
Va.	1	4	7	-	5,737	6,467	7	11	3	9	1	-
W. Va.	-	-	-	-	787	1,046	-	-	-	-	-	-
N.C.	2	-	3	-	11,142	11,004	1	11	-	4	-	-
S.C.	1	1	-	-	6,450	6,277	6	9	-	-	-	-
Ga.	1	1	-	-	9,483	13,592	5	9	-	-	-	-
Fla.	17	5	7	3	19,404	17,970	16	20	5	8	-	2
E.S. CENTRAL	6	3	12	1	21,926	22,643	23	32	-	2	-	-
Ky.	-	-	-	-	2,922	2,904	12	2	-	-	-	-
Tenn.	2	1	8	-	8,405	8,476	8	17	-	2	-	-
Ala.	3	1	3	1	6,571	7,164	1	11	-	-	-	-
Miss.	1	1	1	-	4,028	4,099	2	2	-	-	-	-
W.S. CENTRAL	8	7	17	-	37,542	38,047	94	28	1	33	-	4
Ark.	-	3	-	-	3,088	2,518	-	1	-	3	-	-
La.	3	-	4	-	6,532	5,946	20	8	1	5	-	-
Okla.	1	2	6	-	3,971	3,778	13	4	-	1	-	-
Tex.	4	2	7	-	23,951	25,805	61	15	-	24	-	4
MOUNTAIN	1	-	10	1	9,673	11,322	40	17	2	16	1	1
Mont.	-	-	-	-	406	395	3	-	-	-	-	-
Idaho	-	-	-	-	415	434	2	-	-	-	-	1
Wyo.	-	-	-	-	263	240	1	1	-	1	-	-
Colo.	-	-	2	1	2,576	2,932	5	3	-	-	1	-
N. Mex.	-	-	-	-	1,214	1,257	3	2	-	-	-	-
Ariz.	-	-	4	-	2,636	3,741	16	5	1	11	-	-
Utah	-	-	-	-	417	506	5	1	1	3	-	-
Nev.	1	-	4	-	1,746	1,817	5	5	-	1	-	-
PACIFIC	12	8	45	1	40,616	40,533	68	84	17	20	-	40
Wash.	-	-	5	-	3,446	3,768	18	18	4	3	-	3
Oreg.	-	-	-	-	2,272	2,984	5	7	2	1	-	-
Calif.	12	7	38	1	33,176	31,840	44	58	11	16	-	23
Alaska	-	1	2	-	1,014	1,109	1	-	-	-	-	-
Hawaii	-	-	-	-	708	832	-	1	-	-	-	14
Guam	U	-	-	-	19	39	U	U	U	U	U	-
P.R.	1	-	1	-	826	961	8	6	-	7	-	-
V.I.	U	-	-	-	51	27	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	129	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 17, 1982 and April 18, 1981 (15th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	22	202	82	334	830	81	1,027	137	2,139	23	75	739	802
NEW ENGLAND	-	15	1	6	29	5	57	13	121	-	1	9	66
Maine	-	-	-	-	2	-	2	-	22	-	-	-	31
N.H.	-	1	1	1	4	1	10	-	11	-	-	8	23
Vt.	-	-	-	2	2	-	3	-	4	-	-	-	-
Mass.	-	10	-	1	15	2	16	11	66	-	1	1	7
R.I.	-	1	-	-	-	-	9	1	9	-	-	-	-
Conn.	-	3	-	2	6	2	17	1	10	-	-	-	5
MID. ATLANTIC	6	22	1	33	279	15	156	27	135	5	2	54	102
Upstate N.Y.	2	4	1	19	164	10	44	1	24	5	1	26	41
N.Y. City	-	7	-	12	26	-	26	-	20	-	1	15	21
N.J.	3	7	-	-	21	2	39	3	29	-	-	13	36
Pa.	1	4	-	2	68	3	47	23	62	-	-	-	4
E.N. CENTRAL	2	12	1	19	44	16	124	68	1,245	5	5	83	170
Ohio	1	3	-	-	13	2	47	44	893	-	-	-	-
Ind.	-	1	-	1	3	4	11	3	22	-	3	12	55
Ill.	-	-	1	9	6	10	32	11	68	5	2	22	42
Mich.	1	7	-	9	22	-	25	10	191	-	-	32	22
Wis.	-	1	-	-	-	-	9	-	71	-	-	17	51
W.N. CENTRAL	-	7	-	1	4	-	41	2	147	1	1	22	37
Minn.	-	-	-	-	1	-	9	-	75	1	1	3	6
Iowa	-	3	-	-	1	-	4	1	20	-	-	-	-
Mo.	-	1	-	1	-	-	15	1	13	-	-	13	2
N. Dak.	-	-	-	-	-	-	4	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	-	-	-	1	-
Nebr.	-	2	-	-	1	-	3	-	-	-	-	-	1
Kans.	-	1	-	-	1	-	5	-	39	-	-	5	28
S. ATLANTIC	1	35	1	22	229	15	213	5	142	6	1	20	73
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	-	6	1	2	1	1	8	-	11	-	-	5	-
D.C.	-	3	-	1	1	-	1	-	-	-	-	-	-
Va.	1	16	-	11	3	-	19	2	21	1	1	9	2
W. Va.	-	-	-	1	7	-	7	3	65	-	-	1	15
N.C.	-	-	-	-	2	3	32	-	4	3	-	-	4
S.C.	-	2	-	-	-	1	26	-	9	-	-	1	4
Ga.	-	2	-	-	90	4	59	-	2	-	-	1	19
Fla.	-	6	-	7	135	6	61	-	27	2	-	3	29
E.S. CENTRAL	-	1	-	5	-	5	66	1	22	-	-	30	17
Ky.	-	1	-	1	-	-	6	-	8	-	-	15	11
Tenn.	-	-	-	4	-	2	27	-	8	-	-	-	6
Ala.	-	-	-	-	-	3	30	1	4	-	-	-	-
Miss.	-	-	-	-	-	-	3	-	2	-	-	15	-
W.S. CENTRAL	-	6	3	17	72	2	137	4	70	2	3	49	50
Ark.	-	-	-	-	-	-	8	-	3	-	-	-	-
La.	-	1	-	-	-	-	19	-	1	-	-	-	6
Okla.	-	-	-	-	5	-	9	-	-	-	-	2	-
Tex.	-	5	3	17	67	2	101	4	66	2	3	47	44
MOUNTAIN	2	5	-	-	15	6	66	2	37	2	3	22	40
Mont.	-	-	-	-	-	-	4	-	3	-	-	1	1
Idaho	-	-	-	-	-	-	4	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	-	4	1
Colo.	1	3	-	-	4	2	25	-	6	-	-	1	21
N. Mex.	1	1	-	-	-	-	9	-	-	-	-	1	2
Ariz.	-	1	-	-	2	3	13	-	13	2	1	5	6
Utah	-	-	-	-	-	1	4	2	9	-	2	8	3
Nev.	-	-	-	-	9	-	3	-	2	-	-	2	4
PACIFIC	11	99	75	231	158	17	167	15	220	2	59	450	247
Wash.	-	7	1	15	1	-	21	2	39	1	-	16	37
Oreg.	1	3	-	-	-	6	32	-	-	-	-	2	31
Calif.	10	87	74	214	157	10	106	11	174	1	57	424	179
Alaska	-	-	-	-	-	1	6	1	5	-	-	1	-
Hawaii	-	2	-	2	-	-	2	1	2	-	2	7	-
Guam	U	2	U	1	4	U	-	U	1	U	U	1	-
P.R.	-	2	-	44	118	-	3	-	15	-	-	3	3
V.I.	U	-	U	-	5	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 17, 1982 and April 18, 1981 (15th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES Animal
	CUM 1982	CUM 1981	1982	CUM 1982	CUM 1982	1982	CUM 1982	1982	CUM 1982	CUM 1982
UNITED STATES	9,499	8,775	534	7,014	27	13	109	5	27	1,545
NEW ENGLAND	166	193	22	199	–	–	10	–	–	5
Maine	1	1	3	16	–	–	–	–	–	5
N.H.	–	3	2	10	–	–	–	–	–	–
Vt.	–	11	–	6	–	–	2	–	–	–
Mass.	109	115	14	135	–	–	7	–	–	–
R.I.	11	13	–	8	–	–	–	–	–	–
Conn.	45	45	3	24	–	–	1	–	–	–
MID. ATLANTIC	1,227	1,364	57	1,194	2	1	12	–	–	17
Upstate N.Y.	124	121	16	215	2	–	2	–	–	11
N.Y. City	742	863	22	465	–	1	8	–	–	–
N.J.	148	159	19	224	–	–	2	–	–	1
Pa.	213	229	–	288	–	–	–	–	–	5
E.N. CENTRAL	470	599	108	1,090	–	2	10	–	–	172
Ohio	95	82	16	197	–	2	5	–	–	22
Ind.	54	38	11	145	–	–	–	–	–	32
Ill.	194	342	48	413	–	–	1	–	–	76
Mich.	96	106	25	266	–	–	3	–	–	–
Wis.	31	31	8	64	–	–	–	–	–	42
W.N. CENTRAL	189	152	10	211	6	–	3	–	1	377
Minn.	33	56	2	38	–	–	–	–	–	71
Iowa	7	8	3	32	–	–	1	–	–	126
Mo.	115	75	5	92	5	–	1	–	1	49
N. Dak.	4	2	–	5	–	–	–	–	–	40
S. Dak.	–	–	–	6	–	–	–	–	–	18
Nebr.	7	3	–	7	–	–	–	–	–	38
Kans.	23	7	–	31	1	–	1	–	–	35
S. ATLANTIC	2,638	2,317	98	1,342	6	2	14	2	15	245
Del.	7	7	5	19	–	–	–	–	–	–
Md.	150	177	13	176	1	1	4	–	9	14
D.C.	175	209	3	52	–	–	–	–	–	–
Va.	193	218	12	140	1	–	2	–	–	128
W. Va.	7	6	2	35	–	–	2	–	–	11
N.C.	197	177	16	225	–	–	–	–	4	4
S.C.	123	162	6	164	3	–	2	2	1	16
Ga.	567	590	14	194	–	–	–	–	–	63
Fla.	1,219	771	27	396	1	1	4	–	–	14
E.S. CENTRAL	709	533	40	595	4	–	9	–	5	207
Ky.	35	23	20	160	–	–	–	–	–	39
Tenn.	167	230	11	205	4	–	2	–	1	139
Ala.	243	162	9	183	–	–	6	–	3	29
Miss.	244	108	–	47	–	–	1	–	1	–
W.S. CENTRAL	2,413	2,047	53	749	5	1	6	3	5	292
Ark.	57	36	6	75	4	1	1	1	1	41
La.	506	446	3	130	–	–	–	–	–	7
Okla.	49	52	9	113	1	–	2	–	1	67
Tex.	1,806	1,513	35	431	–	–	3	2	3	177
MOUNTAIN	252	211	23	201	3	–	5	–	–	27
Mont.	1	8	–	15	–	–	–	–	–	13
Idaho	16	2	3	10	1	–	–	–	–	–
Wyo.	9	2	–	2	1	–	–	–	–	2
Colo.	82	71	–	19	–	–	1	–	–	–
N. Mex.	45	66	2	39	–	–	–	–	–	3
Ariz.	55	44	8	83	–	–	3	–	–	9
Utah	7	4	5	11	1	–	1	–	–	–
Nev.	37	34	5	22	–	–	–	–	–	–
PACIFIC	1,360	1,304	93	1,393	1	4	40	–	1	203
Wash.	41	47	5	86	1	–	–	–	–	–
Oreg.	39	30	3	52	–	–	1	–	–	–
Calif.	1,244	1,194	80	1,157	–	4	38	–	1	146
Alaska	6	4	–	18	–	–	–	–	–	57
Hawaii	33	29	2	80	–	–	1	–	–	–
Guam	–	–	U	2	–	U	–	U	–	–
P.R.	174	208	3	83	–	1	1	–	–	14
V.I.	–	2	U	1	–	U	–	U	–	–
Pac. Trust Terr.	–	–	U	19	–	U	–	U	–	–

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending April 17, 1982 (15th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	782	531	177	38	19	17	54
Boston, Mass.	195	116	54	15	3	7	21
Bridgeport, Conn.	54	42	9	2	-	1	4
Cambridge, Mass.	36	30	2	2	2	-	1
Fall River, Mass.	24	19	5	-	-	-	2
Hartford, Conn.	87	57	22	2	2	4	7
Lowell, Mass.	30	23	4	2	1	-	-
Lynn, Mass.	22	14	6	1	1	-	1
New Bedford, Mass.	33	24	8	-	1	-	-
New Haven, Conn.	76	48	17	5	3	1	3
Providence, R.I.	76	49	19	5	3	-	7
Somerville, Mass.	10	9	1	-	-	-	2
Springfield, Mass.	43	29	13	1	-	-	2
Waterbury, Conn.	44	31	7	1	3	2	3
Worcester, Mass.	54	40	10	2	-	2	1
MID ATLANTIC	2,896	1,967	584	174	78	86	102
Albany, N.Y.	54	40	10	-	1	3	2
Allentown, Pa.	16	16	-	-	-	-	-
Buffalo, N.Y.§	150	139	1	1	4	2	7
Camden, N.J.	40	26	9	2	2	-	4
Elizabeth, N.J.	30	19	8	2	1	-	2
Erie, Pa.†	44	28	5	4	2	5	2
Jersey City, N.J.	77	52	13	5	5	2	-
N.Y. City, N.Y.	1,503	994	308	108	38	55	47
Newark, N.J.	80	33	17	11	9	7	3
Paterson, N.J.	33	19	8	3	1	2	2
Philadelphia, Pa.†	405	262	107	27	6	3	16
Pittsburgh, Pa.†	66	44	17	1	2	2	1
Reading, Pa.	34	23	7	2	2	-	4
Rochester, N.Y.	127	97	21	5	3	1	4
Schenectady, N.Y.	18	12	6	-	-	-	-
Scranton, Pa.†	27	21	6	-	-	-	-
Syracuse, N.Y.	93	66	19	3	2	3	5
Trenton, N.J.	39	26	13	-	-	-	1
Utica, N.Y.	28	24	4	-	-	-	1
Yonkers, N.Y.	32	26	5	-	-	1	1
E.N. CENTRAL	2,421	1,552	602	116	64	87	65
Akron, Ohio	94	64	22	4	3	1	-
Canton, Ohio	60	38	14	5	3	-	3
Chicago, Ill.	505	314	134	27	15	15	15
Cincinnati, Ohio	162	96	47	7	3	9	5
Cleveland, Ohio	217	135	62	6	3	11	4
Columbus, Ohio	91	51	22	5	8	5	1
Dayton, Ohio	111	76	25	5	2	3	2
Detroit, Mich.	264	148	71	25	9	11	3
Evansville, Ind.	63	45	15	3	-	-	4
Fort Wayne, Ind.	69	47	17	3	1	1	4
Gary, Ind.	17	10	4	2	1	-	1
Grand Rapids, Mich.	53	31	16	-	2	4	1
Indianapolis, Ind.	160	106	40	3	4	7	2
Madison, Wis.	31	15	10	1	2	3	5
Milwaukee, Wis.	160	118	36	3	-	3	-
Peoria, Ill.	43	32	5	2	-	4	6
Rockford, Ill.	56	39	9	4	4	-	2
South Bend, Ind.	67	52	8	5	-	2	2
Toledo, Ohio	121	81	27	2	4	7	4
Youngstown, Ohio	77	54	18	4	-	1	1
W.N. CENTRAL	751	516	142	31	26	36	21
Des Moines, Iowa	69	49	10	3	3	4	1
Duluth, Minn.	19	15	3	-	-	1	-
Kansas City, Kans.	35	25	4	2	3	1	2
Kansas City, Mo.	116	77	23	7	5	4	3
Lincoln, Nebr.	49	33	15	1	-	-	4
Minneapolis, Minn.	82	53	16	3	2	8	1
Omaha, Nebr.	84	51	21	3	3	6	1
St. Louis, Mo.	150	108	25	4	4	9	3
St. Paul, Minn.	76	61	9	4	1	1	2
Wichita, Kans.	71	44	16	4	5	2	4

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,110	653	301	69	42	43	42
Atlanta, Ga.	136	74	39	10	6	7	6
Baltimore, Md.	146	86	41	12	4	3	3
Charlotte, N.C.	62	26	19	6	3	7	3
Jacksonville, Fla.	104	61	24	9	6	4	3
Miami, Fla.	52	33	14	3	2	-	4
Norfolk, Va.	62	32	19	2	3	6	5
Richmond, Va.	90	55	28	2	3	2	6
Savannah, Ga.	43	26	10	3	1	3	-
St. Petersburg, Fla.	87	68	14	4	1	-	2
Tampa, Fla.	57	36	14	1	3	3	2
Washington, D.C.	222	123	67	16	9	6	5
Wilmington, Del.	49	33	12	1	1	2	3
E.S. CENTRAL	782	489	196	49	30	18	38
Birmingham, Ala.	114	69	34	7	3	1	1
Chattanooga, Tenn.	58	35	17	6	-	-	2
Knoxville, Tenn.	51	32	15	3	1	-	2
Louisville, Ky.	92	66	20	4	1	1	12
Memphis, Tenn.	201	133	45	7	11	5	11
Mobile, Ala.	79	41	19	9	5	5	2
Montgomery, Ala.	44	31	8	1	2	2	2
Nashville, Tenn.	143	82	38	12	7	4	6
W.S. CENTRAL	1,187	710	296	75	65	41	51
Austin, Tex.	33	17	10	1	4	1	-
Baton Rouge, La.	65	35	18	7	5	-	5
Corpus Christi, Tex.	33	18	9	1	4	1	2
Dallas, Tex.	187	103	49	12	15	8	2
El Paso, Tex.	66	37	21	2	2	4	6
Fort Worth, Tex.	94	56	24	6	5	3	7
Houston, Tex.	129	74	36	11	5	3	1
Little Rock, Ark.	83	56	18	6	2	1	9
New Orleans, La.	159	92	47	11	3	6	-
San Antonio, Tex.	164	107	30	9	10	8	4
Shreveport, La.	57	39	12	1	1	4	4
Tulsa, Okla.	117	76	22	8	9	2	11
MOUNTAIN	687	438	132	60	31	26	36
Albuquerque, N. Mex.	91	60	15	10	4	2	3
Colo. Springs, Colo.	43	29	7	4	2	1	5
Denver, Colo.	145	94	33	12	4	2	6
Las Vegas, Nev.	73	40	16	11	4	2	5
Ogden, Utah	17	15	-	2	-	-	2
Phoenix, Ariz.	143	89	29	12	8	5	4
Pueblo, Colo.	17	15	-	1	1	-	-
Salt Lake City, Utah	60	32	14	3	2	9	2
Tucson, Ariz.	98	64	18	5	6	5	9
PACIFIC	1,935	1,295	368	133	63	72	106
Berkeley, Calif.	26	18	7	1	-	-	-
Fresno, Calif.	58	38	11	3	2	4	5
Glendale, Calif.	34	27	4	2	1	-	1
Honolulu, Hawaii	76	50	18	4	3	1	9
Long Beach, Calif.	67	46	17	2	1	1	4
Los Angeles, Calif.	577	386	107	49	23	12	25
Oakland, Calif.	57	39	11	2	1	4	5
Pasadena, Calif.	26	17	5	1	1	2	3
Portland, Oreg.	106	76	22	4	2	2	9
Sacramento, Calif.	77	51	15	6	1	4	3
San Diego, Calif.	219	137	44	15	11	9	17
San Francisco, Calif.	171	108	34	12	4	12	3
San Jose, Calif.	198	130	33	21	12	2	18
Seattle, Wash.	130	91	24	7	-	8	1
Spokane, Wash.	74	47	14	3	1	9	2
Tacoma, Wash.	39	34	2	1	-	2	1
TOTAL	12,551††	8,151	2,798	745	418	426	515

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Influenza – Continued

Editorial Note: The occurrence of several influenza B outbreaks involving nursing home residents, with some associated deaths, illustrates that even during a relatively mild influenza season, such as this year, when virus activity had been predominantly detected among school children, elderly persons are at risk of having moderate to severe influenza infections.

Previous studies have demonstrated that through vaccination it is possible to achieve an approximately 60% to 80% reduction of influenza morbidity among high-risk elderly persons, either living in open (*4*) or closed (*5,6*) populations. The reports from this year, however,as well as retrospective investigations of influenza A or B outbreaks during the past several years (*7,8*) suggest that attack rates can be high for vaccinated nursing home residents, and that the efficacy of current influenza A or B vaccines in reducing influenza morbidity among these persons may be lower than desired. The overall significance of such retrospective investigations is difficult to evaluate. Each of the study groups was selected through passive reporting, possibly introducing bias in selecting only outbreaks in which vaccine efficacy was poor. Accurate vaccine efficacy calculations also depend on several factors, including the validity of the case identification, and the medical basis for vaccine use. There may be many reasons, therefore, why retrospective studies in nursing homes suggesting that vaccine efficacy is low might not be representative of nursing homes in general. To determine whether artifacts of surveillance and investigation substantially affect the validity of conclusions about vaccine efficacy for nursing home residents will require further investigation.

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SWINE INFLUENZA-LIKE ISOLATE — NEVADA

An influenza isolate submitted to CDC from Nevada for reference analysis has been identified as a swine influenza-like virus, antigenically similar to A/New Jersey/76.* This continues a pattern of occasional human infections with swine influenza viruses currently circulating in pigs.

The virus was isolated from a 4-year-old girl who was hospitalized in Las Vegas on February 6 with a temperature of 104 F (40 C), cough, left lower lobe pneumonia, and pancytopenia. The child had been diagnosed in December 1981 as having acute lymphocytic leukemia, for which chemotherapy had been administered continuously since that time. When she visited Los Angeles for intravenous chemotherapy in an outpatient department on January 29, 1982, her leukemia was considered to be in remission, and she had a clear chest on physical examination and no symptoms of respiratory infection. Between January 30, the date of her

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*Redesignated as H1N1 subtype following a revision of influenza nomenclature (*1*).

Influenza – Continued

return to Las Vegas, and February 6, the child visited only 2 homes, occupied by close family members and their friends, in residential subdivisions in Las Vegas. She was in contact with 14 persons including 9 children or young adults. Thirteen of the contacts were interviewed recently, and none reported either respiratory illness at the time of the child's influenza illness or reported contact with pigs. None of these contacts had serum hemagglutination-inhibition titers of >10 to swine influenza-like viruses that could not be explained by the individual's age or probable receipt of swine influenza vaccine during military service in 1976-1977. There were no community morbidity indices indicating influenza outbreaks in Las Vegas from January through April, but 2 influenza A(H1N1) (closely related to A/England/333/80) and 18 influenza B viruses were isolated in 2 hospitals performing virus diagnosis.

After the child was hospitalized on February 6, her pneumonia progressed despite therapy with broad-spectrum antibiotics. On February 11 she was transferred to a Los Angeles hospital where she died on February 14. Laboratory tests in Nevada and Los Angeles were negative for any infectious agent except influenza virus. Interviews at the hospitals in Las Vegas and Los Angeles have not identified any unusual respiratory illnesses among patients or staff in contact with the child. Antibody prevalence to swine influenza-like virus in young children in Las Vegas and Los Angeles, as well as contacts of the patients in the Los Angeles hospital, will be studied. No other human isolations of swine influenza-like viruses have been reported to CDC this winter.

Reported by O Ravenholt, MD, Clark County Health District, J McCusker, MD, RR Belliveau, MD, Southern Nevada Memorial Hospital, P Reichelderfer, PhD, Sunrise Hospital, BA Neyland, MD, Las Vegas, JH Carr, MD, State Epidemiologist, Nevada State Dept of Human Resources; J Cherry, MD, UCLA, B Agee, MD, Los Angeles County Health Dept, R Roberto, MD, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; Field Svcs Div, Epidemiology Program Office, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: This incident is consistent with the infection in 1974 by swine influenza-like virus of an immunocompromised child, who subsequently died (*2*). Sporadic isolations of swine influenza-like virus from children or young adults were reported in 1976-1977 (*3*) and also in 1978-1979 and 1979-1980 (*4*). The sporadic isolations after 1974 were not associated with unusual clinical symptoms, and the source of these infections, as well as the case in 1974, could be attributed to exposure to swine. Serologic evidence of swine influenza infection involving some members of a farming family exposed to pigs has also been reported (*5*). The single proven outbreak of swine influenza among humans in 1976, at Fort Dix, New Jersey, is believed to have involved person-to-person transmission over a few weeks in the atypical environment of the training camp (*6*). Low-level person-to-person transmission may also have been responsible for 3 reported serologically diagnosed cases of swine influenza in 1975-1977, when, as in the case of the Las Vegas child, no exposure to swine could be identified (*3, 7*).

The lack of other swine influenza-like virus isolations from humans in Nevada or California this winter, despite the isolation of numerous influenza B and human strains of influenza A(H1N1) viruses in these states this winter, and the lack of respiratory illness among any of the child's family contacts (many of them apparently susceptible as judged by their antibody status and age) support the conclusion that swine influenza-like viruses that currently circulate in pigs have not demonstrated the propensity to cause human epidemics. Nevertheless, transmissions from swine to human, and subsequently from person to person at generally low levels will probably continue to be detected occasionally by virus surveillance activities.

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Influenza — Continued

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Epidemiologic Notes and Reports

Pseudomonas aeruginosa Peritonitis Attributed to a Contaminated Iodophor Solution — Georgia

Five infections involving patients at a hospital have been attributed to use of contaminated Prepodyne Solution.* Intrinsic contamination of this iodophor product with *Pseudomonas aeruginosa* has been confirmed by CDC, and investigation by the Food and Drug Administration (FDA) and CDC is continuing.

In the period March 9-April 12, 1982, 5 chronic peritoneal dialysis patients at a municipal hospital in Atlanta became infected with *P. aeruginosa*. Four patients developed peritonitis, and 1 developed a skin infection at the catheter insertion site. All 4 patients with peritonitis had low-grade fever, cloudy peritoneal fluid, and abdominal pain. Three of these patients used an automatic peritoneal dialysis machine; 1 used only a bottle cycling machine. All patients had permanent indwelling peritoneal catheters, which were wiped with a 4x4 gauze soaked with an iodophor, Prepodyne Solution, each time the catheter was connected to or disconnected from machine tubing. Aliquots of Prepodyne Solution were transferred from stock bottles to smaller in-use bottles.

Infection-control personnel at the hospital obtained cultures of the dialysate concentrate, internal areas of the dialysis machines, and a small in-use plastic container that had been filled with Prepodyne Solution. All cultures were negative except the Prepodyne Solution, which yielded a pure culture of *P. aeruginosa*. Subsequently, 2 of 8 unopened 1-gallon containers of Prepodyne Solution, lot C109756, one obtained from the dialysis center and a second from another hospital area, were culture-positive; they, too, yielded a pure culture of *P. aeruginosa*. The antimicrobial susceptibility patterns of the isolates obtained from the Prepodyne Solution were identical to those of 2 available isolates from patients; these organisms were sensitive when tested in the hospital to amikacin, carbenicillin, gentamicin, kanamycin, tetracycline, tobramycin, and trimethoprim-sulfamethoxazole, and were resistant to ampicillin and cephalothin.

Reported by PL Parrott, RN, PM Terry, M(ASCP), B Whitworth, RN, L Frawley, RN, JE McGowan Jr, MD, Grady Memorial Hospital, Atlanta, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human

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*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the the U.S. Department of Health and Human Services.

Pseudomonas aeruginosa Peritonitis – Continued

Resources; Hepatitis and Viral Enteritis Div, Hospital Infections Program, Center for Infectious Diseases, CDC.

Editorial Note: Intrinsic contamination of Prepodyne Solution, lot C109756, has been confirmed by CDC in 1 of 2 unopened 1-gallon containers. The product is manufactured for AMSCO/Medical Products Division by West Chemical Products, Inc. FDA and CDC are currently investigating the source of this intrinsic contamination, the extent of contamination (in terms of products, lots, and distribution), and the factors permitting the survival of *P. aeruginosa* in this product and in the bottles that were used. AMSCO has instituted a voluntary withdrawal of lot C109756 (1-gallon containers), and has notified hospitals that had received the implicated lot. Personnel in hospitals using this product may wish to review patient infections caused by *P. aeruginosa* and notify appropriate local or state health departments about any unusual problems.

This is the second report of contamination of an iodophor solution (*1,2*) and the first of a poloxamer-iodine solution. Poloxamer-iodine and povidone-iodine are the most commonly used iodophor preparations in hospitals; both preparations have now been demonstrated to be vulnerable to intrinsic contamination. Pseudobacteremia has been described in association with the use of a contaminated iodophor preparation; the report above demonstrates that contaminated solutions may lead to true infections. Although several iodophor antiseptic preparations, of which Prepodyne Solution is one, are widely used in hospitals for disinfectant purposes, they are FDA-approved only for antisepsis of skin and mucous membranes.

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The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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CENTERS FOR DISEASE CONTROL

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Epidemiologic Notes and Reports

Toxic-Shock Syndrome, United States, 1970-1982

As of April 9, 1982, 1,660 cases of toxic-shock syndrome (TSS) meeting the current CDC case definition* have been reported. To date, 492 cases with onset in 1981 have been reported compared with 867 cases with onset in 1980 (Figure 1). Eighty-eight cases have resulted in death (case-fatality ratio, 5.6% of those with known outcome), including 15 cases in 1981 (case-fatality ratio, 3.3%).

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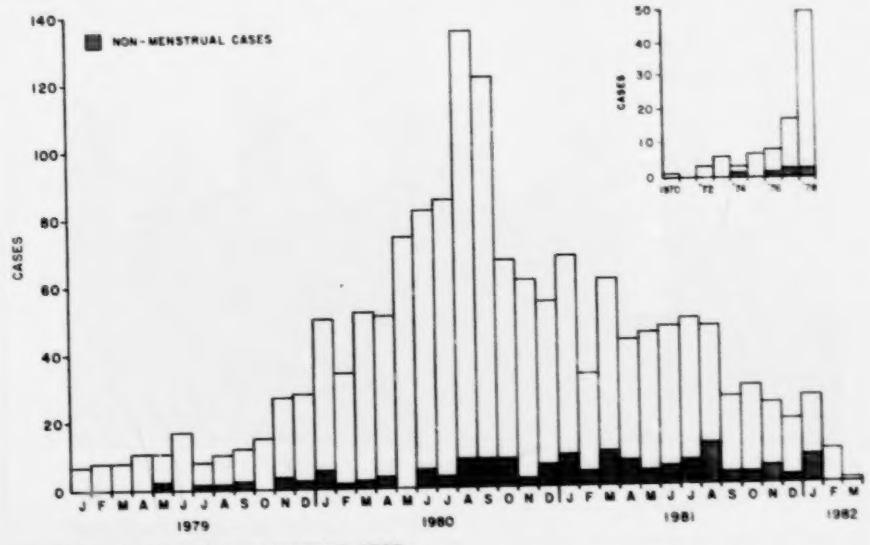
*The current CDC case definition is the original case definition (*1*) with 2 modifications suggested by the Conference of State and Territorial Epidemiologists: 1) orthostatic dizziness is now considered sufficient evidence of hypotension, and 2) the presence of *Staphylococcus aureus* in blood cultures does not exclude a case from consideration. The change in case definition results in the reclassification of fewer than 5% of cases.

FIGURE 1. Confirmed cases of toxic-shock syndrome, United States, January 1970-March 1982*



*Reports received through April 9, 1982.

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Toxic-Shock Syndrome – Continued

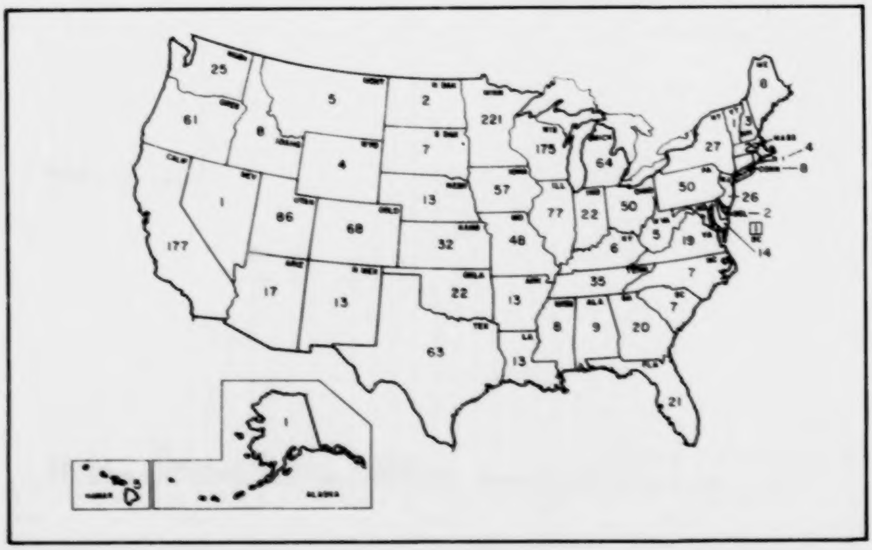
Demographic characteristics were analyzed for those cases for which relevant data were available. A total of 1,588 (96%) cases involved women, of whom at least 92% had onset during a menstrual period. Overall, 154 cases were known to have been unassociated with menstruation. The age range for all female patients was 1-64 years, with a mean of 22.9 years and a median of 21 years. The age range for 55 male patients was 1-75 years, with a mean of 24.5 years and a median of 20 years. Of the 1,355 cases in which the patient's race was known, 1,315 (97%) occurred in white non-Hispanics, including 98% of the menstrual cases and 90% of the nonmenstrual cases.

Nonmenstrual cases accounted for 15% of the reported cases with onset in 1981, compared with 6% of cases with onset before 1981. Nonmenstrual TSS has been seen following childbirth by vaginal delivery and cesarean section and in association with therapeutic abortions, infected surgical wounds, hydradenitis, lymphadenitis, deep abscesses, and infected cutaneous and subcutaneous lesions such as burns, abrasions, lacerations, furuncles, and insect bites.

TSS cases have been reported by all 50 states and the District of Columbia (Figure 2), but 35% of reported cases have come from 3 states, Minnesota, California, and Wisconsin. The 2 states with the highest reported incidence of TSS in 1980, Minnesota and Utah, noted different trends in reporting during the last quarter of 1980 and the first 2 quarters of 1981 (*2,3*). While the number of TSS cases per month reported in Utah declined in late 1980 and early 1981 relative to the number of cases reported in the late summer and early fall of 1980 (Figure 3), no such decrease in reporting was observed in Minnesota (Figure 4).

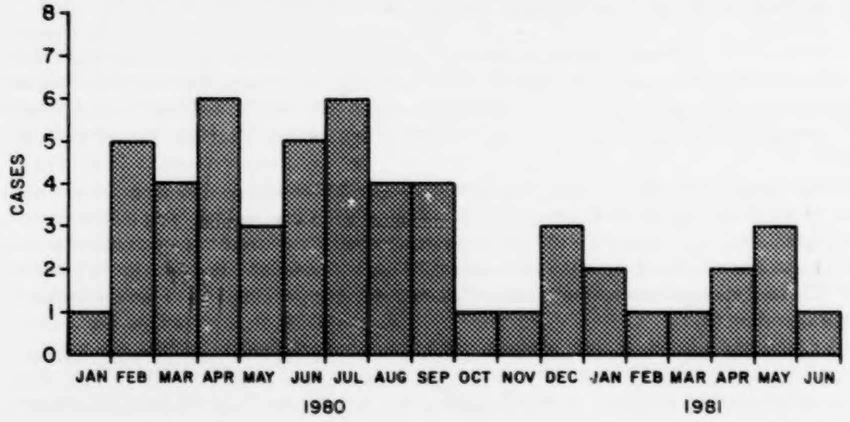
Reported by Conference of State and Territorial Epidemiologists; JC Forfang, MT Osterholm, PhD, MPH, AG Dean, MD, State Epidemiologist, Minnesota Dept of Heath; SJ Stolz, JM Vergeront, JP Davis, MD,

FIGURE 2. Confirmed cases of toxic-shock syndrome, United States, reported as of April 9, 1982



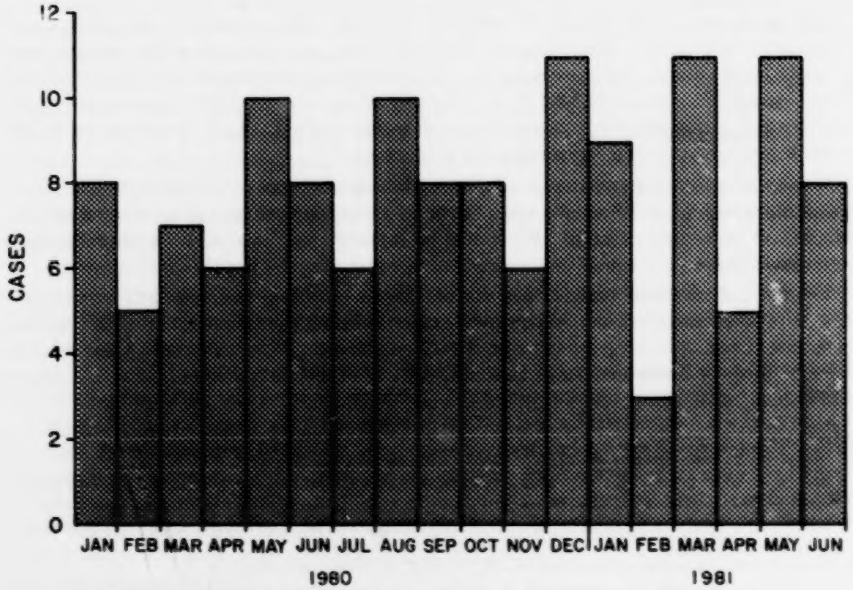
Toxic-Shock Syndrome — Continued

FIGURE 3. Confirmed cases of toxic-shock syndrome, Utah, January 1980-June 1981*



*Reports received through April 9, 1982.

FIGURE 4. Confirmed cases of toxic-shock syndrome, Minnesota, January 1980-June 1981*



*Reports received through February 17, 1982.

Toxic-Shock Syndrome — Continued

State Epidemiologist, Wisconsin Dept of Health and Social Svcs; CR Nichols, RE Johns Jr, MD, State Epidemiologist, Utah Dept of Health; Field Svcs Div, Epidemiology Program Office, Special Pathogens Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: As demonstrated in Figures 1 and 2, TSS continues to occur throughout the United States. CDC is currently receiving approximately 50 case reports a month that meet the revised CDC case definition. The number of cases reported for the most recent months appears low because of delay between the onset of a case and the reporting of that case to CDC.

The observed decrease in reporting of menstrual TSS cases since the summer and early fall of 1980 has been noted previously (*4*). During the same period, the number of nonmenstrual TSS cases reported to CDC has not declined. The extent to which the observed change is due to a decrease in the incidence of TSS, as opposed to a decrease in the reporting of TSS to state health departments and CDC, is not known, although both factors are probably important (*5*).

Factors that might have affected the incidence of menstrual TSS during the last quarter of 1980 and the first half of 1981 include changes in the number of tampon users, in the way in which women use tampons, in the availability and frequency of use of different brands of tampons, in the rate of vaginal carriage of strains of *Staphylococcus aureus* capable of causing TSS, or in other unrecognized factors in the natural history of the disease.

Factors potentially affecting reporting of TSS during this period include increased recognition of the disease, waning media attention and publicity, variable activity of state and local health department surveillance programs, changes in referral patterns, and changes in the treatment of TSS.

TSS continues to be recognized primarily in young white women in association with menstruation and tampon use. However, TSS is also being recognized in an increasingly wide array of clinical settings and in association with staphylococcal infections at a variety of sites. Nonmenstrual TSS accounted for 15% of the cases having onset in 1981. This increase in the proportion of cases that are unassociated with menstruation is due in large part to the decrease in the number of menstrual cases being reported.

At present, it is important that physicians and the general public be aware that TSS continues to occur in association with menstruation and tampon use as well as in other circumstances. All suspected cases of TSS should be reported promptly to the appropriate state health department.

Women can markedly reduce their risk of TSS by not using tampons, and women who choose to wear tampons can reduce their risk by wearing them intermittently during each menstrual period. Informing women about TSS and advising them to remove their tampons and seek medical attention if they develop symptoms of the disease appear to be reasonable public health measures.

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Gynecomastia in Haitians — Puerto Rico, Florida, Texas, New York

Since the fall of 1981, gynecomastia has been occurring in Haitian men located in the Immigration and Naturalization Service's (INS) Service Processing Centers. Although no cause has been found, the condition appears to be spontaneously resolving.

In November 1981, several Haitian men at the INS Fort Allen Service Processing Center, Puerto Rico, presented at the Public Health Service Clinic complaining of breast enlargement. Because of this unusual occurrence of gynecomastia, CDC was asked on November 30 to assist in an epidemiologic investigation.

Of 540 male Haitians 18-50 years old examined, 77 (14.3%) had gynecomastia—defined as a palpable, firm, discoid, subareolar, unilateral or bilateral breast mass. Of these 77 persons, 11 had noted the problem in Haiti, and 5 in Miami. Of 187 non-Haitian, male employees of the Center examined, 6 (3.2%) had gynecomastia, and of these, 2 had the problem before the facility opened. The difference in prevalence between Haitians and Center employees was statistically significant ($p < 0.0005$).

After the disorder was recognized in Fort Allen, cases of gynecomastia were found in Haitians in other INS facilities, including the INS Service Processing Center, El Paso, Texas, and the Krome North Service Processing Center, Miami, Florida. Because all Haitians entering the United States and processed by INS are first processed at Krome, further investigation was continued there. On January 4, 1982, examination of the entire Haitian male population at Krome for gynecomastia was completed. Of 522 male Haitians, 52 (10.0%) had gynecomastia. Of these 52, 2 reported to have had the disorder before leaving Haiti. One of 10 non-Haitian aliens processed at Krome also reported the recent development of gynecomastia.

A case-control study was done at Fort Allen and Krome during December and January that consisted of a questionnaire and a physical examination that included examination of the skin, hair, and genitalia and palpation of the thyroid and liver. Preliminary analysis showed no statistically significant differences between cases and controls.

On March 22, 1982, 49 of the 53 patients examined in January were reexamined; 21 patients (43%) had no evidence of gynecomastia, and 15 had a decrease in breast size. Therefore, 36/49 (74%) of the originally detected cases have had either total or partial remission. Most of these 36 occurred among Haitians who arrived by late September 1981.

In March 1982, 18 new cases were detected in Haitian men at Krome who had had no evidence of gynecomastia when examined in January. On March 22, the prevalence at Krome was 46/528 (8.7%).

Surveillance continues for new cases at facilities where Haitians are being detained. Recently, active surveillance detected cases in Brooklyn, New York (4/28 persons screened, 14%) and in Otisville, New York (17/97 persons screened, 18%). No new cases have been reported at Fort Allen.

Analysis of serum specimens from participants in the case-control study for prolactin, luteinizing hormone, testosterone, estradiol, blood-urea-nitrogen, creatinine, serum glutamic oxaloacetic transaminase, serum glutamic pyruvic transaminase, bilirubin, creatine phosphokinase, lactate dehydrogenase, and calcium has not been completed. Screening of urine specimens for drugs that act on the central nervous system and have been associated with gynecomastia was negative (*1*). Milk and eggs obtained in December and January from Fort Allen and Krome were tested for diethylstilbesterol and were negative. In addition, other food items, water, and other environmental agents are being tested for the presence of estrogen or estrogen-like compounds.

Reported by PHS Chief Medical Officers, Fort Allen (Puerto Rico) and Krome North (Miami, Florida) Immi-

Gynecomastia – Continued

gration and Naturalization Service's Service Processing Centers; Center for Environmental Health, Epidemiology Program Office, Quarantine Div, Center for Prevention Svcs, CDC.

Editorial Note: Gynecomastia has been now detected at 5 facilities where Haitians are being detained. Although all male Haitains processed by INS were initially processed at Krome, several of the men with gynecomastia detected at other facilities had been at Krome for less than 2 weeks. Neither the incidence nor the prevalence of gynecomastia in Haiti is known. Although some Haitian entrants may have had gynecomastia before arriving in the United States, there is no question that gynecomastia has developed in Haitian men after arrival.

The epidemiologic findings at Krome show that the cases of gynecomastia there are spontaneously resolving and that the development and resolution of the process appears related to date of arrival. Two possible hypotheses to explain these cases of gynecomastia are 1) that the diet of Haitians improved greatly after they arrived in the United States causing refeeding gynecomastia (*1*) or 2) that the affected men were exposed to an estrogen or estrogen-like substance during processing at Krome.

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TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		18th WEEK ENDING			CUMULATIVE, FIRST 18 WEEKS		
		April 24 1982	April 25 1981	MEDIAN 1977-1981	April 24 1982	April 25 1981	MEDIAN 1977-1981
Aseptic meningitis		87	55	45	1,182	1,016	758
Brucellosis		2	8	3	33	33	45
Encephalitis:	Primary (arthropod-borne & unspec.)	21	8	12	221	216	186
	Post-infectious	4	–	5	19	26	50
Gonorrhea:	Civilian	15,322	18,437	17,712	276,565	296,589	287,750
	Military	419	483	483	7,986	8,914	8,365
Hepatitis:	Type A	387	465	542	6,807	7,713	8,561
	Type B	394	430	314	6,052	5,810	4,891
	Non A, Non B	56	N	N	602	N	N
	Unspecified	187	183	157	2,813	3,245	3,105
Legionellosis		20	N	N	106	N	N
Leprosy		2	10	4	55	67	50
Malaria		7	19	11	210	371	144
Measles (rubeola)		81	88	911	416	918	5,417
Meningococcal infections:	Total	89	78	57	1,119	1,534	1,071
	Civilian	89	78	57	1,115	1,530	1,061
	Military	-	–	–	4	4	9
Mumps		130	85	324	2,269	1,679	6,335
Pertussis		16	21	19	325	324	324
Rubella(German measles)		70	66	509	810	866	5,024
Syphilis (Primary & Secondary):	Civilian	642	564	442	10,141	9,339	7,390
	Military	9	6	5	125	114	94
Tuberculosis		565	572	572	7,577	7,726	8,147
Tularemia		2	6	4	29	33	28
Typhoid fever		6	5	4	115	147	117
Typhus fever, tick-borne (RMSF)		5	6	4	31	27	25
Rabies, animal		133	154	153	1,682	2,172	1,263

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism	20	Paralytic	1
Cholera	–	Psittacosis (Minn. 3)	26
Congenital rubella syndrome	3	Rabies, human	–
Diphtheria	–	Tetanus (Iowa 1, Ark. 1, Tex. 1)	16
Leptospirosis (Va. 2)	20	Trichinosis (Fla. 1)	35
Plague	2	Typhus fever, flea-borne (endemic, murine) (Ala. 1)	5

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending April 24, 1982 and April 25, 1981 (16th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	87	33	221	19	276,565	296,589	387	394	56	187	20	55
NEW ENGLAND	1	-	10	3	6,668	7,257	16	22	3	19	2	1
Maine	-	-	-	-	316	376	2	-	-	1	1	-
N.H.	-	-	-	-	200	260	-	1	1	-	-	-
Vt.	-	-	-	-	144	121	2	-	1	-	-	-
Mass.	1	-	3	-	3,052	3,053	5	8	1	16	-	-
R.I.	-	-	-	-	470	339	6	-	-	-	-	-
Conn.	-	-	7	3	2,486	3,108	1	13	-	2	1	1
MID. ATLANTIC	10	-	30	2	34,084	34,384	57	97	9	16	12	3
Upstate N.Y.	-	-	14	-	5,644	5,386	9	25	1	3	-	-
N.Y. City	2	-	5	-	14,023	14,152	22	38	-	5	-	1
N.J.	5	-	4	-	6,271	6,835	15	23	8	5	-	1
Pa.	3	-	7	2	8,146	8,011	11	11	-	3	12	1
E.N. CENTRAL	8	-	49	6	36,688	47,300	45	27	2	27	1	-
Ohio	2	-	16	4	11,730	17,004	24	13	-	12	-	-
Ind.	-	-	12	2	4,156	3,655	3	1	2	9	-	-
Ill.	-	-	-	-	7,413	12,990	6	3	-	1	-	-
Mich.	4	-	19	-	9,610	9,662	11	8	-	5	1	-
Wis.	2	-	2	-	3,779	3,989	1	2	-	-	-	-
W.N. CENTRAL	3	2	11	1	13,085	13,902	14	20	4	3	1	-
Minn.	-	-	-	1	1,939	2,224	3	7	-	-	-	-
Iowa	1	1	6	-	1,463	1,460	1	3	-	-	1	-
Mo.	-	1	3	-	6,030	6,300	5	5	1	2	-	-
N. Dak.	-	-	-	-	185	184	-	-	-	-	-	-
S. Dak.	-	-	-	-	376	390	-	-	-	-	-	-
Nebr.	-	-	1	-	789	1,002	-	2	-	-	-	-
Kans.	2	-	1	-	2,303	2,342	5	3	3	1	-	-
S. ATLANTIC	26	12	29	3	69,796	73,069	29	83	12	21	2	4
Del.	-	-	-	-	1,144	1,103	-	10	-	-	-	-
Md.	-	-	9	-	9,452	7,908	2	15	4	2	-	2
D.C.	-	-	-	-	3,722	4,714	-	-	-	-	-	-
Va.	2	4	9	-	6,170	6,854	3	7	1	2	2	-
W. Va.	1	-	-	-	850	1,111	-	-	-	-	-	-
N.C.	3	-	3	-	11,684	11,568	3	6	-	2	-	-
S.C.	-	2	-	-	6,891	6,725	2	5	-	2	-	-
Ga.	-	1	-	-	9,483	14,355	6	21	1	3	-	-
Fla.	20	5	8	3	20,400	18,731	13	19	6	10	-	2
E.S. CENTRAL	7	3	13	1	23,556	24,073	16	22	1	5	-	-
Ky.	1	-	-	-	3,164	3,168	7	3	-	2	-	-
Tenn.	4	1	9	-	8,968	8,948	4	10	-	3	-	-
Ala.	2	1	3	1	7,057	7,457	2	9	1	-	-	-
Miss.	-	1	1	-	4,367	4,500	3	-	-	-	-	-
W.S. CENTRAL	10	8	21	-	39,508	40,480	92	33	1	60	-	5
Ark.	1	3	1	-	3,334	2,719	3	3	1	6	-	-
La.	1	1	4	-	7,026	6,321	7	3	-	4	-	-
Okla.	3	2	6	-	4,242	4,069	25	6	-	7	-	-
Tex.	5	2	10	-	24,906	27,371	57	21	-	43	-	5
MOUNTAIN	3	-	10	1	10,256	12,125	32	15	9	12	-	1
Mont.	-	-	-	-	444	438	3	-	-	-	-	-
Idaho	-	-	-	-	466	501	-	-	2	-	-	1
Wyo.	-	-	-	-	276	254	-	-	-	-	-	-
Colo.	1	-	2	1	2,759	3,143	9	4	2	2	-	-
N. Mex.	-	-	-	-	1,275	1,323	5	-	-	-	-	-
Ariz.	-	-	4	-	2,751	3,932	7	4	2	9	-	-
Utah	1	-	-	-	446	560	3	1	3	-	-	-
Nev.	1	-	4	-	1,839	1,974	5	6	-	1	-	-
PACIFIC	19	8	48	2	42,924	43,999	86	75	15	24	2	41
Wash.	4	-	5	-	3,623	3,987	7	6	-	-	2	3
Oreg.	1	-	1	-	2,376	3,160	2	5	-	-	-	-
Calif.	13	7	40	2	35,106	34,756	71	61	15	24	-	23
Alaska	1	1	2	-	1,073	1,200	-	-	-	-	-	1
Hawaii	-	-	-	-	746	896	6	3	-	-	-	14
Guam	U	-	-	-	19	41	U	U	U	U	U	-
P.R.	-	-	1	-	923	1,015	6	3	-	5	-	-
V.I.	U	-	-	-	51	34	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	134	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 24, 1982 and April 25, 1981 (16th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	7	210	41	416	918	89	1,119	130	2,269	16	70	810	866
NEW ENGLAND	-	15	1	7	30	4	61	7	128	-	-	9	69
Maine	-	-	-	-	2	-	2	3	25	-	-	-	31
N.H.	-	1	-	1	5	-	10	1	12	-	-	8	25
Vt.	-	-	-	2	2	1	4	-	4	-	-	-	-
Mass.	-	10	1	2	15	-	16	2	68	-	-	1	8
R.I.	-	1	-	-	-	-	9	1	9	-	-	-	-
Conn.	-	3	-	2	6	3	20	-	10	-	-	-	5
MID. ATLANTIC	1	23	4	35	283	18	174	12	147	4	1	55	105
Upstate N.Y.	-	4	2	19	167	4	48	2	30	3	-	29	43
N.Y. City	1	8	2	14	27	2	28	4	24	1	1	16	21
N.J.	-	7	-	-	21	3	42	1	26	-	-	10	37
Pa.	-	4	-	2	68	9	56	5	67	-	-	-	4
E.N. CENTRAL	-	13	-	19	56	19	146	66	1,311	2	2	85	190
Ohio	-	3	-	-	15	3	50	61	954	2	-	-	-
Ind.	-	1	-	1	3	2	13	1	23	-	2	14	57
Ill.	-	1	-	9	14	11	46	1	69	-	-	22	55
Mich.	-	7	-	9	24	3	28	3	194	-	-	32	23
Wis.	-	1	-	-	-	-	9	-	71	-	-	17	55
W.N. CENTRAL	-	7	1	2	4	4	45	2	149	-	2	24	52
Minn.	-	-	-	-	1	-	9	-	75	-	-	3	6
Iowa	-	3	-	-	1	1	5	-	21	-	-	-	-
Mo.	-	1	1	2	-	1	16	1	13	-	2	15	2
N. Dak.	-	-	-	-	-	-	4	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	1	-	-	1	-
Nebr.	-	2	-	-	1	1	4	1	-	-	-	-	1
Kans.	-	1	-	-	1	1	6	-	39	-	-	5	43
S. ATLANTIC	1	36	1	26	244	15	228	9	151	1	1	21	80
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	-	6	-	2	1	1	9	1	12	-	-	5	1
D.C.	-	3	-	1	1	-	1	-	-	-	-	-	-
Va.	-	16	-	14	3	4	23	1	22	-	1	10	3
W. Va.	-	-	-	1	7	-	7	4	69	-	-	1	15
N.C.	-	-	-	-	2	3	35	1	5	-	-	-	4
S.C.	-	2	-	-	-	1	27	-	9	-	-	1	6
Ga.	-	2	-	-	80	2	61	1	3	-	-	1	20
Fla.	1	7	1	8	150	4	65	1	28	1	-	3	31
E.S. CENTRAL	-	1	-	5	-	4	70	2	24	2	-	30	18
Ky.	-	1	-	1	-	2	8	-	8	-	-	15	11
Tenn.	-	-	-	4	-	2	29	1	9	-	-	-	7
Ala.	-	-	-	-	-	-	30	-	4	-	-	-	-
Miss.	-	-	-	-	-	-	3	1	3	2	-	15	-
W.S. CENTRAL	1	8	4	21	122	9	146	13	83	4	6	55	51
Ark.	-	1	-	-	-	-	9	1	4	-	-	-	-
La.	1	2	-	-	-	1	20	-	1	-	-	-	7
Okla.	-	-	-	-	5	1	10	-	-	-	-	2	-
Tex.	-	5	4	21	117	7	108	12	78	4	6	53	44
MOUNTAIN	-	5	-	-	16	2	68	-	37	-	2	25	45
Mont.	-	-	-	-	-	-	4	-	3	-	2	3	1
Idaho	-	-	-	-	-	-	4	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	-	4	1
Colo.	-	3	-	-	4	-	25	-	6	-	-	1	21
N. Mex.	-	1	-	-	1	1	10	-	-	-	-	2	2
Ariz.	-	1	-	-	2	1	14	-	13	-	-	5	10
Utah	-	-	-	-	-	-	4	-	9	-	-	8	3
Nev.	-	-	-	-	9	-	3	-	2	-	-	2	5
PACIFIC	4	132	70	301	163	14	181	19	239	3	56	506	256
Wash.	-	6	-	15	1	-	21	-	39	1	-	16	38
Oreg.	-	3	-	-	-	3	35	-	-	-	-	2	31
Calif.	4	121	70	284	162	10	116	19	193	2	56	480	187
Alaska	-	-	-	-	-	1	7	-	5	-	-	1	-
Hawaii	-	2	-	2	-	-	2	-	2	-	-	7	-
Guam	U	2	U	1	4	U	-	U	1	U	U	1	-
P.R.	-	2	7	51	132	-	3	8	23	5	-	3	3
V.I.	U	-	U	-	5	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 24, 1982 and April 25, 1981 (16th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	10,141	9,339	565	7,577	29	6	115	5	31	1,682
NEW ENGLAND	195	202	10	208	–	1	11	–	–	5
Maine	1	1	–	16	–	–	–	–	–	5
N.H.	–	9	–	9	–	–	–	–	–	–
Vt.	–	11	–	6	–	–	2	–	–	–
Mass.	138	121	6	141	–	1	8	–	–	–
R.I.	12	13	1	9	–	–	–	–	–	–
Conn.	44	47	3	27	–	–	1	–	–	–
MID. ATLANTIC	1,385	1,436	96	1,290	2	–	12	–	–	23
Upstate N.Y.	133	121	13	229	2	–	2	–	–	14
N.Y. City	864	909	27	493	–	–	8	–	–	–
N.J.	164	168	19	243	–	–	2	–	–	1
Pa.	224	238	37	325	–	–	–	–	–	8
E.N. CENTRAL	521	643	75	1,165	–	1	11	–	–	189
Ohio	105	86	16	213	–	–	6	–	–	26
Ind.	64	39	U	145	–	–	–	–	–	35
Ill.	219	378	28	446	–	–	1	–	–	86
Mich.	97	109	23	289	–	1	4	–	–	–
Wis.	36	31	8	72	–	–	–	–	–	42
W.N. CENTRAL	202	169	21	232	6	–	3	–	1	407
Minn.	33	62	5	43	–	–	–	–	–	74
Iowa	11	8	1	13	–	–	1	–	–	134
Mo.	124	63	12	104	5	–	1	–	1	50
N. Dak.	4	2	–	5	–	–	–	–	–	44
S. Dak.	–	2	–	6	–	–	–	–	–	18
Nebr.	7	3	1	8	–	–	–	–	–	38
Kans.	23	9	2	33	1	–	1	–	–	49
S. ATLANTIC	2,791	2,449	109	1,490	6	1	15	–	14	267
Del.	7	7	–	18	–	–	–	–	–	–
Md.	157	194	11	189	1	–	4	–	7	16
D.C.	178	223	3	55	–	–	–	–	–	–
Va.	149	235	20	160	1	–	2	–	–	129
W. Va.	8	7	3	38	–	–	2	–	–	13
N.C.	208	184	16	240	–	–	–	–	4	5
S.C.	136	170	6	150	3	–	2	–	3	18
Ga.	611	633	17	211	–	–	–	–	–	68
Fla.	1,287	796	33	429	1	1	5	–	–	19
E.S. CENTRAL	761	626	81	676	4	–	9	–	5	216
Ky.	38	23	26	186	–	–	–	–	–	40
Tenn.	204	249	30	235	4	–	2	–	1	147
Ala.	265	169	17	200	–	–	6	–	3	29
Miss.	254	185	8	55	–	–	1	–	1	–
W.S. CENTRAL	2,558	2,198	67	816	7	–	6	5	10	328
Ark.	74	42	7	82	5	–	1	1	2	48
La.	539	446	16	146	–	–	–	–	–	7
Okla.	54	62	6	119	2	–	2	2	3	77
Tex.	1,891	1,648	38	469	–	–	3	2	5	196
MOUNTAIN	269	225	16	217	3	–	5	–	–	36
Mont.	1	8	1	16	–	–	–	–	–	16
Idaho	16	2	–	10	1	–	–	–	–	–
Wyo.	9	2	–	2	1	–	–	–	–	2
Colo.	83	75	7	26	–	–	1	–	–	–
N. Mex.	54	52	–	39	–	–	–	–	–	3
Ariz.	59	44	7	90	–	–	3	–	–	15
Utah	10	5	–	11	1	–	1	–	–	–
Nev.	37	37	1	23	–	–	–	–	–	–
PACIFIC	1,459	1,391	90	1,483	1	3	43	–	1	211
Wash.	41	51	2	88	1	2	2	–	–	–
Oreg.	41	32	3	55	–	–	1	–	–	–
Calif.	1,337	1,275	74	1,231	–	1	39	–	1	153
Alaska	6	4	–	18	–	–	–	–	–	58
Hawaii	34	29	11	91	–	–	1	–	–	–
Guam	–	–	U	2	–	U	–	U	–	–
P.R.	188	230	1	94	–	–	1	–	–	17
V.I.	–	2	U	1	–	U	–	U	–	–
Pac. Trust Terr.	–	–	U	19	–	U	–	U	–	–

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending April 24, 1982 (16th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	684	483	125	37	17	22	53
Boston, Mass.	183	124	33	10	7	9	23
Bridgeport, Conn.	43	30	10	1	1	1	2
Cambridge, Mass.	29	22	6	1	–	–	6
Fall River, Mass.	24	18	6	–	–	–	–
Hartford, Conn.	71	44	17	6	3	1	–
Lowell, Mass.	29	24	4	1	–	–	2
Lynn, Mass.	28	26	2	–	–	–	–
New Bedford, Mass.	30	22	7	1	–	–	1
New Haven, Conn.	59	40	6	5	3	5	3
Providence, R.I.	39	33	5	–	–	1	4
Somerville, Mass.	11	10	–	1	–	–	1
Springfield, Mass.	49	30	10	2	3	4	8
Waterbury, Conn.	29	22	5	2	–	–	1
Worcester, Mass.	60	38	14	7	–	1	2
MID. ATLANTIC	2,480	1,677	498	141	85	79	109
Albany, N.Y.	59	50	5	1	1	2	1
Allentown, Pa.	15	15	–	–	–	–	–
Buffalo, N.Y.	150	102	36	5	4	3	8
Camden, N.J.	30	14	12	3	–	1	–
Elizabeth, N.J.	23	18	3	2	–	–	–
Erie, Pa.†	37	26	8	1	–	2	2
Jersey City, N.J.	60	31	14	3	8	4	–
N.Y. City, N.Y.	1,424	957	286	97	50	34	56
Newark, N.J.	74	43	15	6	4	6	4
Paterson, N.J.	29	20	7	1	1	–	3
Philadelphia, Pa.†	125	80	22	5	3	15	8
Pittsburgh, Pa.†	70	48	17	1	3	1	3
Reading, Pa.	32	26	4	1	–	1	5
Rochester, N.Y.	129	92	21	5	4	7	8
Schenectady, N.Y.	28	20	6	2	–	–	2
Scranton, Pa.†	36	26	8	1	1	–	1
Syracuse, N.Y.	70	47	15	4	2	2	3
Trenton, N.J.	40	25	9	3	2	1	3
Utica, N.Y.	25	19	6	–	–	–	1
Yonkers, N.Y.	24	18	4	–	2	–	1
E.N. CENTRAL	2,367	1,493	550	150	66	107	96
Akron, Ohio	76	47	20	3	2	4	–
Canton, Ohio	45	31	11	1	2	–	1
Chicago, Ill.	565	321	133	46	22	43	16
Cincinnati, Ohio	121	78	29	8	3	3	12
Cleveland, Ohio	204	114	57	17	6	10	7
Columbus, Ohio	173	114	34	13	4	8	9
Dayton, Ohio	104	67	27	5	2	3	3
Detroit, Mich.	286	173	71	25	9	8	11
Evansville, Ind.	44	28	10	2	3	1	–
Fort Wayne, Ind.	54	35	14	1	–	4	2
Gary, Ind.	10	7	2	1	–	–	–
Grand Rapids, Mich.	68	47	14	2	1	4	4
Indianapolis, Ind.	151	93	41	7	5	5	6
Madison, Wis.	36	20	10	3	1	2	7
Milwaukee, Wis.	142	109	29	1	2	1	1
Peoria, Ill.	50	34	13	1	–	2	8
Rockford, Ill.	37	22	9	5	–	1	3
South Bend, Ind.	51	32	10	3	1	5	4
Toledo, Ohio §	89	80	1	2	2	3	1
Youngstown, Ohio	61	41	15	4	1	–	1
W.N. CENTRAL	770	514	163	43	30	20	24
Des Moines, Iowa	63	43	14	2	3	1	1
Duluth, Minn.	33	26	6	1	–	–	1
Kansas City, Kans.	36	30	3	3	1	1	2
Kansas City, Mo.	127	75	32	10	9	1	5
Lincoln, Nebr.	9	4	2	1	–	2	–
Minneapolis, Minn.	101	71	18	5	4	3	1
Omaha, Nebr.	89	58	22	4	3	2	1
St. Louis, Mo.	163	108	36	10	5	4	10
St. Paul, Minn.	77	52	18	3	1	3	3
Wichita, Kans.	70	47	12	4	4	3	–
S. ATLANTIC	1,102	679	283	64	38	37	41
Atlanta, Ga.	139	79	40	10	8	2	5
Baltimore, Md.	133	78	36	8	3	8	3
Charlotte, N.C.	87	52	23	8	1	2	4
Jacksonville, Fla.	108	69	27	6	6	–	6
Miami, Fla.	124	67	36	10	7	4	–
Norfolk, Va.	50	31	10	4	1	4	3
Richmond, Va.	72	50	19	2	–	1	6
Savannah, Ga.	37	24	8	1	2	2	4
St. Petersburg, Fla.	104	82	17	2	–	3	4
Tampa, Fla.	67	41	13	2	4	7	3
Washington, D.C.	102	54	33	9	3	3	3
Wilmington, Del.	79	52	21	2	3	1	–
E.S. CENTRAL	745	468	187	34	34	22	39
Birmingham, Ala.	113	66	31	1	9	6	2
Chattanooga, Tenn.	62	44	15	2	1	–	6
Knoxville, Tenn.	60	45	10	2	2	1	2
Louisville, Ky.	109	62	28	10	4	5	9
Memphis, Tenn.	151	97	42	6	6	–	11
Mobile, Ala.	58	32	21	2	1	2	1
Montgomery, Ala.	49	33	10	2	3	1	3
Nashville, Tenn.	143	89	30	9	8	7	5
W.S. CENTRAL	1,289	779	316	93	47	54	33
Austin, Tex.	50	35	7	3	2	3	2
Baton Rouge, La.	59	39	11	7	–	2	3
Corpus Christi, Tex.	54	34	12	1	2	5	1
Dallas, Tex.	204	118	56	18	4	8	4
El Paso, Tex.	57	38	9	3	3	4	1
Fort Worth, Tex.	80	52	20	1	3	4	1
Houston, Tex.	319	161	94	36	16	12	6
Little Rock, Ark.	70	48	14	4	–	4	4
New Orleans, La.	137	80	39	8	6	4	–
San Antonio, Tex.	134	90	28	6	6	4	5
Shreveport, La.	37	23	9	–	2	3	1
Tulsa, Okla.	88	61	17	6	3	1	5
MOUNTAIN	644	391	152	49	29	23	32
Albuquerque, N.Mex.	86	53	16	13	2	2	3
Colo. Springs, Colo.	48	35	9	1	2	1	9
Denver, Colo.	121	74	29	11	5	2	2
Las Vegas, Nev.	90	48	31	6	4	1	4
Ogden, Utah	14	8	5	–	–	1	1
Phoenix, Ariz.	136	80	29	11	8	8	5
Pueblo, Colo.	12	10	1	–	1	–	1
Salt Lake City, Utah	48	26	9	4	3	6	–
Tucson, Ariz.	89	57	23	3	4	2	7
PACIFIC	1,822	1,174	402	117	62	66	92
Berkeley, Calif.	17	11	5	1	–	–	2
Fresno, Calif.	74	45	14	5	6	4	2
Glendale, Calif.	24	19	5	–	–	–	1
Honolulu, Hawaii	63	34	20	4	1	4	3
Long Beach, Calif.	102	69	20	6	2	5	3
Los Angeles, Calif.	499	327	103	37	16	15	18
Oakland, Calif.	101	62	24	9	2	4	3
Pasadena, Calif.	35	26	5	2	1	1	–
Portland, Oreg.	132	85	30	5	6	6	9
Sacramento, Calif.	73	49	12	5	3	4	6
San Diego, Calif.	152	90	40	13	4	5	14
San Francisco, Calif.	148	99	26	13	5	5	6
San Jose, Calif.	169	101	53	7	6	2	11
Seattle, Wash.	143	90	30	7	8	8	4
Spokane, Wash.	51	35	10	1	2	3	6
Tacoma, Wash.	39	32	5	2	–	–	4
TOTAL	11,903††	7,658	2,676	728	408	430	519

---

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Characteristics of Measles Cases — United States, 1981

CDC has received detailed written information concerning investigations of 1,759 (58.0%) of the 3,032 measles cases provisionally reported in the United States in 1981. This information, submitted voluntarily by 35 states and 2 local health departments, has been reviewed to determine age, immunity status, and school and day-care-center attendance of the patients. These data have been useful in classifying measles cases by preventability, and measles patients by age and accessibility to school- and day-care-center based control measures.*

Of 1,759 persons with measles, 1,061 (60.3%) were school age, 5-19 years old (Table 1); an additional 547 measles cases (31.1%) involved preschool children. The other 151 patients (8.6%) were not in school-age or preschool groups.

Of the 1,759 measles cases, 780 (44.3%) were classified as not preventable because the patients were either too young or too old for routine vaccination, or because they had adequate evidence of immunity to measles. Of the 979 potentially preventable cases, 661 (37.6% of the total 1,759) were readily accessible to control measures, since the affected children attended schools or day-care centers. The other 318 persons (18.1%) were not readily accessible—not of school age or not known to attend a day-care center.

Of the 1,061 measles cases involving school-age children (Table 2), 638 (60.1%) were identified as potentially preventable. The remaining 423 children, although accessible, did not have preventable cases because they had adequate evidence of immunity to measles. A considerably higher percentage of preventable cases occurred in older schoolchildren.

TABLE 1. Measles cases by age group, United States, 1981

Age Group	No. Cases	Percentage of Total
Preschool		
0-14 months	219	12.5
15 months-4 years	328	18.6
Subtotal	547	31.1
School-Age		
5-9 years	375	21.3
10-14 years	382	21.7
15-19 years	304	17.3
Subtotal	1,061	60.3
Adults		
20-24 years	90	5.1
25+ years	61	3.5
Subtotal	151	8.6
TOTAL	1,759	100.0

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*__Potentially preventable case__—measles illness occurring in a person at least 15 months of age and born after 1956 who lacked adequate evidence of immunity to measles.

Adequate evidence of immunity—history of live measles vaccine on or after the first birthday (date of vaccination must be specified) or history of physician-diagnosed measles illness.

Accessibility to control measures—enrollment in a recognized day-care center or age 5-19 years (old enough to attend school).

Measles – Continued

Of the 547 measles cases among preschool-age children (Table 3), 285 (52.1%) were classified as not preventable: 219 (40.0%) children were less than 15 months old, and 66 (12.1%) had adequate evidence of immunity to measles. Of the 262 children with potentially preventable measles cases, 239 (43.7% of the total 547) were not listed as attending day-care centers and thus were not readily accessible to control measures. Therefore, only 23 (4.2%) measles cases occurring among the preschool-age children were both potentially preventable and in children readily accessible to control measures.

Reported by participating state and local immunization programs; Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: This analysis represents the first time that information has been analyzed on a national basis to determine the potential preventability of reported measles cases and the accessibility of patients to school-based control measures. Limitations of the data must be taken into consideration in the analysis. Case reports were derived from a nonrandom sample of the total reported measles cases in 1981. Completeness of reporting varied among the reporting areas. If no immunity status or prior history of physician-diagnosed measles illness was provided, it was assumed that the person did not have adequate evidence of immunity to measles. If no day-care center was named, it was assumed that a preschool-age child did not attend a day-care center. Furthermore, incidence rates by vaccination status and day-care-center attendance cannot be determined because the denominator populations are not known. Nevertheless, the data are helpful in evaluating areas in which further emphasis in the measles elimination program should be placed.

TABLE 2. Measles cases in school-age children, classified by age group and immunity status, United States, 1981

Age Group (Years)	Potentially Preventable	Not Preventable	Total
5-9	176 (46.9%)	199 (53.1%)	375 (100.0%)
10-14	219 (57.3%)	163 (42.7%)	382 (100.0%)
15-19	243 (79.9%)	61 (20.1%)	304 (100.0%)
TOTAL	638 (60.1%)	423 (39.9%)	1,061 (100.0%)

TABLE 3. Measles cases in preschool-age children, classified by age group, day-care-center attendance, and immunity status, United States, 1981

Age Group	Potentially Preventable	Not Preventable	Total
< 15 months	NA*	219 (40.0%)	219 (40.0%)
15 months-4 years (attending day-care center)	23 (4.2%)	19 (3.5%)	42 (7.7%)
15 months-4 years (not attending day-care center	239 (43.7%)	47 (8.6%)	286 (52.3%)
TOTAL	262 (47.9%)	285 (52.1%)	547 (100.0%)

*Not applicable.

Measles – Continued

A majority of cases occurred in the school-age population, a group that is easily accessible to control measures. The higher proportion of preventable cases in older children suggests that health authorities should continue to concentrate efforts on ensuring that junior and senior high school students have adequate evidence of immunity to measles.

Preliminary data indicate that although the actual number of cases in the preschool population decreased from 1980 to 1981, the proportion of cases occurring among preschoolers increased because of greater reductions in the number of cases among school-age children. This might have been expected since a major focus of the measles elimination effort is on school-law enforcement.

It is also expected that most preschool children who have measles are not attending organized day-care centers since many states have and enforce measles-vaccination regulations for day-care centers. Additional strategies implemented to improve immunization levels in preschool children include: postpartum maternal education programs, tracking systems for infants deemed to be at high risk of lacking vaccinations, recall systems for children who miss appointments for vaccinations, and intensive case containment activities. Additional efforts may be necessary to locate and vaccinate preschool children in those few areas of the country where substantial numbers of preschool cases are reported.

Introduced Autochthonous *Vivax* Malaria – California, 1980-1981

Two cases of locally introduced *Plasmodium vivax* malaria have recently been reported from the Central Valley of California. The case histories are described below.

Case 1. On August 20, 1980, a 55-year-old truck driver left his home in San Bernardino County to haul grapes from vineyards to wineries in the Central Valley of California. He remained well until October 2, 1980, when he had onset of malaise, nausea, myalgias, and drowsiness; 5 days later he also experienced chills, high fever, and profuse sweats. He attributed his symptoms to "the flu" but noted they recurred almost each evening between 5 p.m. and 7 p.m. When the symptoms occurred, he would lie down in the truck and cover himself with blankets; by morning he usually felt well enough to continue driving. On October 20 he felt so ill that he returned home. The next day a laboratory technologist at Loma Linda University Medical Center identified *P. vivax* on a routine peripheral blood smear, and malaria was diagnosed. The patient responded promptly to antimalarial treatment with chloroquine and primaquine.

Investigation of possible sources of infection revealed no patient history of blood transfusions, IV drug or shared-needle usage, military service or travel in areas endemic for malaria. By the time he became ill, he had traveled several thousand miles in 11 counties of the Central Valley, plus Napa and Sonoma counties. His usual routine was to arrive at a vineyard at night, sleep in his unscreened truck until dawn, load grapes, and then deliver them to a winery. He recalled receiving mosquito bites but paid little attention to them.

Of the 14 areas visited by the patient and surveyed by the state's Vector Biology and Control Section, only the light trap near Artois in Glenn County showed substantial *Anopheles* activity during his periods of possible exposure. Evaluation of a ranch near Artois, which he had visited 6 times in the period September 9-19, indicated that *Anopheles* would have been abundant at that time; however, no malaria-like illness occurred among ranch workers. Rice fields, a prime habitat of *A. freeborni*, were within 1 mile of the vineyard. Many farm workers

Vivax Malaria — Continued

who lived or worked near the ranch had recently arrived from malaria-endemic areas of India and Mexico, but an investigation in areas where the patient traveled failed to reveal any other unreported or suspected cases of locally transmitted malaria.

Case 2. On September 5, 1981, a 46-year-old long-term resident of Yuba County became ill with fever, chills, headache, sore throat, nausea, and abdominal pain. On September 8, after pharyngitis was diagnosed at a local emergency room, he was treated with IM penicillin. On September 14, he returned to the same emergency room because of persistent symptoms, and ampicillin was prescribed. On September 17, he went to the Yuba General Clinic complaining of nausea and fever and shaking chills that recurred daily at about 3:00 p.m and lasted 30-45 minutes. On examination, he was found to be jaundiced with a tender liver and abdomen. Malaria was suspected and quickly confirmed at the Sutter-Yuma County Public Health Laboratory by demonstration of *P. vivax* on peripheral blood smears. Treatment of the patient with chloroquine and primaquine resulted in prompt recovery.

The patient had no history of blood transfusion, drug abuse, or travel outside the United States. The only recent travel outside the area had been an automobile trip to Pampa, Texas, between August 26 and September 1, 1981.

The patient lives 3 miles south of Marysville in a semi-rural setting next to the Feather River and within 1/4 mile of rice fields and orchards. He had not been employed regularly since December 1980. In the spring and summer of 1981 he did extensive fishing and camping throughout Sutter and Yuba counties, and often received many mosquito bites.

Malaria smears and serum specimens from the patient's wife, 2 children, and 3 members of an adjacent household were all negative for *P. vivax*. Intensive surveillance in the Sutter-Yuba area failed to reveal any other cases of malaria that could have been acquired locally through the mosquito-borne route. The Sutter-Yuba Mosquito Abatement District reported that *A. freeborni* (an efficient *P. vivax* vector) was abundant in Sutter and Yuba counties, including the patient's neighborhood, throughout the summer. Mosquito-control efforts in the area had included hand spraying with insecticide around the patient's house and insecticide cold-fogging on 3 occasions for a 1/2-mile radius from the house.

Reported by AF Taylor, S Gaspers, LE Mahoney, MD, San Bernardino County Health Dept, T Roswell, MD, Loma Linda University Medical Center; LE Pine, D Dragoni, MD, Glenn County Health Dept, K Whitesell, Glenn County Mosquito Abatement District (MAD), J Buckingham, Diablo Valley MAD, A Hibbard, MD, Yuba General Clinic, Marysville, L Eberhardt, J Hornstein, MPH, P Stotler, RN, M Cusick, MD, Sutter-Yuba County Health Dept, E Kauffmann, MPH, Sutter-Yuba MAD, RR Roberto, MD, D Womeldorf, MD, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; Malaria Br, Parasitic Diseases Div, Center for Infectious Diseases, Quarantine Div, Center for Preventive Svcs, Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: Considering the average 14-day incubation period for *vivax* malaria, and the travel history of the 2 patients, the infections reported here were most likely acquired in the northern part of California's Sacramento (Central) Valley. Historically, mosquito-transmitted malaria in California has been confined to the Central Valley where ecologic habitats provided by irrigated farmlands—including fruit orchards and rice fields—are ideal for the breeding of *A. freeborni*, a highly susceptible vector of *vivax* malaria. In addition, non-refugee agricultural workers from malarious countries provide a reservoir of *vivax* parasites in such areas as Sutter and Yuba counties.

Mosquito transmission in non-endemic areas (introduced malaria) requires only the presence of susceptible mosquitoes together with gametocytemic individuals. However, the chances for introduced malaria transmission are exceedingly low in this country because an exact sequence of interacting events involving mosquito, reservoir, and host must occur, and

Vivax Malaria – Continued

because there is a low probability that infected mosquitoes will survive beyond the maturation time required for the parasites (12-14 days for *vivax* malaria).

Thus, despite periodic large influxes of imported malaria cases, only 13 isolated episodes of introduced malaria have occurred in the United States in the past 30 years. In 1970, when the number of imported cases reached the highest level in recent years (4,247) due to American military personnel returning from Southeast Asia, 1 instance of introduced malaria was identified. This case was reported from Texas where a Mexican migrant was identified as the probable source of *vivax* gametocytes.

Like the previous 11 episodes, the 2 cases reported here were isolated events. Introduced malaria does not pose a substantial public health threat provided current malaria surveillance procedures and malaria awareness among medical personnel are maintained.

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The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

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CENTERS FOR DISEASE CONTROL

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Recommendation of the Immunization Practices Advisory Committee (ACIP)

Measles Prevention

These revised ACIP Measles Prevention recommendations represent an update of the previous recommendations (MMWR 1978;27:427-30, 435-7) to include current information about vaccine effectiveness and measles elimination efforts. There are no basic changes in approach. Further discussion is included of atypical measles syndrome and of revaccination of prior recipients of killed measles virus vaccine. Recommendations for vaccination of persons with allergies are revised. As the incidence rate of measles declines, serologic confirmation becomes more important. New recommendations for international travel are included.

INTRODUCTION

Measles (rubeola) is often a severe disease, frequently complicated by middle ear infection or bronchopneumonia. Encephalitis occurs in approximately 1 of every 2,000 reported cases; survivors often have permanent brain damage and mental retardation. Death, predominantly from respiratory and neurologic causes, occurs in 1 of every 3,000 reported measles cases. The risk of death is known to be greater for infants and adults than for children and adolescents.

Measles illness during pregnancy increases fetal risk. Most commonly, this involves premature labor and moderately increased rates of spontaneous abortion and of low birth-weight infants. Results of 1 retrospective study in an isolated population suggest that measles infection in the first trimester of pregnancy was associated with an increased rate of congenital malformation.

Before measles vaccine was available, more than 400,000 measles cases were reported each year in the United States. Since the licensure of vaccine in 1963, the collaborative efforts of professional and voluntary medical and public health organizations in vaccination programs have resulted in a 99% reduction in the reported incidence of measles. In 1981, a provisional total of 3,032 cases were reported. In the pre-vaccine era, most measles cases affected preschool and young school-age children. In 1980, more than 60% of cases in which the age was known occurred among persons ≥10 years old. More than 25% of the cases were reported among the 10- to 14-year-old age group, and more than 20% were reported among the 15- to 19-year-old age group.

With the highly effective, safe measles vaccine now available, the degree of measles control that has been achieved in the United States has depended largely on the effectiveness of the continuing efforts to vaccinate all susceptible persons who can safely be vaccinated. An initiative to eliminate indigenous measles from the United States by fall of 1982 is proceeding satisfactorily.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

HE 20.7009:

Measles – Continued

MEASLES VIRUS VACCINE

Live measles virus vaccine* available in the United States is prepared in chick embryo cell culture. The vaccine virus strain has been attenuated beyond the level of the original Edmonston B strain and is therefore known as a further attenuated strain. Vaccine prepared with the further attentuated measles virus causes fewer reactions than its predecessor, Edmonston B vaccine, which is no longer distributed in the United States. Measles vaccine is available in monovalent (measles only) form and in combinations: measles-rubella (MR) and measles-mumps-rubella (MMR) vaccines. All vaccines containing measles antigen are recommended for use at about 15 months of age under routine conditions. MMR is the vaccine of choice for use in routine infant-child vaccination programs. In all situations where measles vaccine is to be used, a combination vaccine should be given if recipients are likely to be susceptible to rubella and/or mumps as well as to measles.

Measles vaccine produces a mild or inapparent, non-communicable infection. Measles antibodies develop in at least 95% of susceptible children vaccinated at about 15 months of age or older with the current further attentuated vaccine. Protection against measles has been assessed both by measuring serum antibodies and by evaluating clinical protection in epidemiologic studies. Evidence now extending through 16 years indicates that although the titers of vaccine-induced antibodies are lower than those following natural disease, the protection conferred appears to be durable.

The most commonly employed test for measurement of immunity to measles is the hemagglutination-inhibition (HI) test. Most, but not all, immune individuals will have measles HI antibody levels of ≥4. More sensitive methods to determine measles immunity are not widely available at present. Routine serologic screening to determine measles immunity is not recommended.

Asymptomatic measles reinfection can occur in persons who have previously developed antibodies, whether from vaccination or from natural disease. Symptomatic reinfections have been reported rarely. These individuals have had ≥4-fold rises in measles HI antibody titers but have not had detectable measles-specific IgM antibodies in appropriately timed serum specimens. These rare symptomatic reinfections do not appear to be epidemiologically important.

Vaccine Shipment and Storage

Failure of protection against measles may result from the administration of improperly stored vaccine. Since 1979 a new stabilizer has been added to the vaccine that makes it more resistant to inactivation by heat. However, during storage before reconstitution, measles vaccine must be kept at 2-8 C (35.6-46.4 F) or colder. It must also be protected from light, which may inactivate the virus. Vaccine must be shipped at 10 C (50 F) or colder and may be shipped on dry ice.

VACCINE USAGE

General Recommendations

Persons can be considered immune to measles only if they have documentation of:

(1) Physician-diagnosed measles,

(2) Laboratory evidence of measles immunity, or

(3) Adequate immunization with live measles vaccine on or after the first birthday.

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*Official name: Measles Virus Vaccine, Live, Attentuated

Measles – Continued

Most persons born before 1957 are likely to have been infected naturally and generally need not be considered susceptible. All other children, adolescents, and adults are considered susceptible and should be vaccinated, if there are no contraindications. This includes persons who may be immune to measles but who lack adequate documentation of immunity.

Dosage

At least 95% of vaccine recipients develop measles antibody following a single dose of live vaccine administered around 15 months of age. Since evidence now extending through 16 years indicates that the protection conferred is durable, there is no need for a "booster" dose of vaccine.

Concern has been raised that the small percentage of persons who continue to be susceptible after receiving a single dose might be able to sustain measles transmission, and therefore a second dose has been suggested for all vaccinees in order to reduce the proportion of susceptible persons to below the 5% that remain after initial vaccination.

There is no evidence that measles transmission can be sustained among the small percentage of persons who remain susceptible after receiving 1 dose of vaccine. In fact, measles has been eliminated in most areas of the country using the single-dose recommendation. Since it is impractical and inefficient to attempt to identify the small percentage of remaining susceptible persons, efforts should be concentrated on extending initial vaccination to the greatest number of recipients.

After weighing the evidence, the Committee continues to recommend only a single dose of measles vaccine around 15 months of age.

A single dose of live measles vaccine (as a monovalent or combination product) should be given subcutaneously in the volume specified by the manufacturer. Immune globulin (IG) should NOT be given with further attentuated measles virus vaccine.

Age at Vaccination

Measles vaccine is indicated for persons susceptible to measles, regardless of age, unless otherwise contraindicated (see below). Current evidence indicates that for a maximum rate of seroconversion, measles vaccine should preferably be given when children are about 15 months of age. Because cases continue to occur in preschool children, increased emphasis must be placed on vaccinating children promptly at 15 months of age. It is particularly important to vaccinate young children ≥15 months of age before they might encounter measles in day-care centers or other environments where young children cluster.

Because of the continuing occurrence of cases in older children and young adults, the immune status of all adolescents should be evaluated. Complete measles control will require protection of all susceptibles; therefore, increased emphasis must be placed on vaccinating susceptible adolescents and young adults. Susceptible persons include those who received inactivated vaccine or who were given live measles virus vaccine before their first birthday, as well as those who were never vaccinated or never had measles.

Revaccination of Persons Vaccinated According to Earlier Recommendations

Previous vaccination with live vaccine: Persons vaccinated with live measles vaccine before their first birthday should be identified and revaccinated.

There has been some confusion concerning the immunity of children vaccinated against measles at 12 months of age. Some recent data have indicated a slightly lower rate of seroconversion among children vaccinated at 12 months of age than among those vaccinated at 13 months or later. This difference is not sufficient to warrant routinely revaccinating persons who were vaccinated at 12 months of age since the vast majority are fully protected. If, how-

Measles – Continued

ever, the parents of a child vaccinated when 12-14 months old request revaccination for the child, there is no immunologic or safety reason to deny the request.

Previous vaccination with killed vaccine or vaccine of unknown type: In the past, the Committee has recommended revaccination with live measles vaccine for persons vaccinated at any age with inactivated vaccine (available in the United States from 1963 to 1967) and for persons vaccinated with inactivated vaccine followed by live vaccine within 3 months. This recommendation was based on the knowledge that some persons who had received inactivated vaccine were at risk of developing severe atypical measles syndrome when exposed to the natural virus. Persons who developed atypical measles occasionally developed serious complications requiring hospitalization. The recommendation was also based on the belief that revaccination with live measles vaccine would usually protect such persons against atypical measles. Limited data suggest that a substantial percentage of persons revaccinated with live measles vaccine will be protected, although the duration of immunity and degree of protection are not known precisely.

A wide percentage range (4%-55%) of prior recipients of killed measles vaccine who were revaccinated with live measles vaccine have been reported to have had reactions to the live vaccine. Most of these reactions are mild and consist of local swelling and erythema with or without low-grade fever lasting 1-2 days. Rarely, more severe reactions, including prolonged high fevers and extensive local reactions, have been reported that have required hospitalization. Prior recipients of killed measles vaccine are more likely to have serious illness when exposed to natural measles than when given live measles virus vaccine.

The Committee has considered the risks and benefits of revaccination for prior recipients of inactivated measles vaccine and believes that if such persons are identified, they should be revaccinated with live measles virus vaccine to prevent atypical measles syndrome. Revaccination is particularly important when exposure to natural measles virus is considered likely.

These same recommendations apply to persons vaccinated between 1963 and 1967 with a vaccine of unknown type since their only vaccination may have been with inactivated vaccine. Since killed measles vaccine was not distributed in the United States after 1967, persons vaccinated after 1967 with a vaccine of unknown type need not be revaccinated.

Individuals Exposed to Disease

Use of vaccine: Exposure to measles is not a contraindication to vaccination. Available data suggest that live measles vaccine, if given within 72 hours of measles exposure, may provide protection. If the exposure did not result in infection, the vaccine should induce protection against subsequent measles infection.

Use of IG: IG can be given to prevent or modify measles in a susceptible person within 6 days of exposure. The recommended dose of IG is 0.25 ml/kg (0.11 ml/lb) of body weight (maximum dose—15 ml). IG may be especially indicated for susceptible household contacts of measles patients, particularly contacts under 1 year of age, for whom the risk of complications is highest. Live measles vaccine should be given about 3 months later when the passive measles antibodies should have disappeared, if the child is then at least 15 months old. *IG should not be used in an attempt to control measles outbreaks.*

SIDE EFFECTS AND ADVERSE REACTIONS

Experience with approximately 131 million doses of measles vaccine distributed in the United States through 1981 indicates an excellent record of safety. About 5%-15% of vaccinees may develop a temperature of ≥103 F (≥39.4 C) beginning about the sixth day after vaccination and lasting up to 5 days. Reports generally indicate that most persons with fever

Measles — Continued

are otherwise asymptomatic. Transient rashes have been reported in approximately 5% of vaccinees. Central nervous system conditions including encephalitis and encephalopathy have been reported once for approximately every million doses administered. The incidence rate of encephalitis or encephalopathy following measles vaccination is lower than the observed incidence rate of encephalitis of unknown etiology, suggesting that some or most of the reported severe neurologic disorders may be only temporally related to measles vaccination rather than due to vaccination. Limited data indicate that reactions to vaccine are not age-related.

Subacute sclerosing panencephalitis (SSPE) is a "slow virus" infection of the central nervous system associated with measles virus. Results from studies indicate that measles vaccine, by protecting against measles, significantly reduces the chance of developing SSPE. The recent decline in numbers of SSPE cases in the presence of careful surveillance is additional strong presumptive evidence of a protective effect of measles vaccination. However, there have been some reports of SSPE in children who did not have a history of natural measles but who did receive measles vaccine. Some of these cases may have resulted from unrecognized measles illness in the first year of life or possibly from the measles vaccine.

Revaccination Risks

There is no evidence of enhanced risk from receiving live measles vaccine in persons who have previously received live measles vaccine or had measles. Specifically, there does not appear to be any enhanced risk of SSPE.

On exposure to natural measles, some children who had been given inactivated measles virus vaccine previously have developed atypical measles, sometimes with severe symptoms. Reactions, such as local edema and induration, lymphadenopathy, and fever, have at times been observed when live measles virus vaccine was administered to recipients of inactivated vaccine. However, despite the risk of local reaction, persons born since 1956 who have previously been given inactivated vaccine (whether administered alone or followed by a dose of live vaccine within 3 months) should be revaccinated with live vaccine to avoid the severe atypical form of natural measles and to provide full and lasting protection. (See section **Previous vaccination with killed vaccine or vaccine of unknown type.**)

PRECAUTIONS AND CONTRAINDICATIONS

Pregnancy: Live measles vaccine should not be given to women known to be pregnant. This precaution is based on the theoretical risk of fetal infection, which applies to the administration of any live virus vaccine to women who might be pregnant or who might become pregnant shortly after vaccination. No evidence exists to substantiate this theoretical risk from measles vaccine. Considering the importance of protecting adolescents and young adults against measles with its known serious risks, asking women if they are pregnant, excluding those who are, and explaining the theoretical risks to the others are the recommended precautions in a measles immunization program.

Febrile illness: Vaccination of persons with febrile illness should be postponed until recovery. However, susceptible children with minor illnesses such as upper respiratory infections should be vaccinated. Considering the importance of protecting against measles, medical personnel should use every opportunity to vaccinate susceptible children.

Allergies: Live measles vaccine is produced in chick embryo cell culture. Hypersensitivity reactions very rarely follow the administration of live measles vaccine. Most of these reactions are considered minor and consist of wheal and flare or urticaria at the injection site. However, with over 131 million doses of measles vaccine distributed in the United States there have

Measles – Continued

been 3 reported cases of immediate allergic reactions in children who had histories of anaphylactoid reactions to egg ingestion. These reactions to vaccine could potentially have been life threatening. Two children experienced difficulty breathing; 1 of these had hypotension. Persons with a history of anaphylactoid reactions (hives, swelling of the mouth and throat, difficulty breathing, hypotension and shock) subsequent to egg ingestion should be vaccinated only with extreme caution. Evidence indicates that persons are not at increased risk if they have egg allergies that are not anaphylactoid in nature. Such persons should be vaccinated in the usual manner. There is no evidence to indicate that persons with allergies to chickens or feathers are at increased risk of reaction to the vaccine.

Since measles vaccine contains trace amounts of neomycin (25 μg), persons who have experienced anaphylactoid reactions to topically or systemically administered neomycin should not receive measles vaccine. Most often, neomycin allergy is manifested as a contact dermatitis which is a delayed-type (cell-mediated) immune response rather than anaphylaxis. In such individuals, the adverse reaction, if any, to 25 μg of neomycin in the vaccine would be an erythematous, pruritic nodule or papule at 48-96 hours. A history of contact dermatitis to neomycin is not a contraindication to receiving measles vaccine. Live measles virus vaccine does not contain penicillin.

Recent administration of IG: Vaccination should be deferred for 3 months after a person has received IG, whole blood, or other antibody-containing blood products because passively acquired antibodies might interfere with the response to the vaccine.

Tuberculosis: Tuberculosis may be exacerbated by natural measles infection. There is no evidence, however, that the live measles virus vaccine has such an effect. Therefore, tuberculin skin testing is not a prerequisite for measles vaccination. The value of protection against natural measles far outweighs the theoretical hazard of possibly exacerbating unsuspected tuberculosis. If there is a need for tuberculin skin testing, it can be done on the day of vaccination and read 48 to 72 hours later. If a recent vaccinee proves to have evidence of tuberculous infection, prompt investigation and, if indicated, preventive treatment or treatment for tuberculous disease should be initiated. It is prudent to wait 4-6 weeks after measles immunization before administering a tuberculin skin test since measles vaccination may temporarily suppress tuberculin reactivity.

Altered immunity: Replication of the measles vaccine virus may be potentiated in patients with immune deficiency diseases and by the suppressed immune responses that occur with leukemia, lymphoma, or generalized malignancy, or with therapy with corticosteroids, alkylating drugs, antimetabolites, or radiation. Patients with such conditions should not be given live measles virus vaccine. Since vaccinated persons do not transmit vaccine virus, the risk to these patients of being exposed to measles may be reduced by vaccinating their close susceptible contacts. Management of such persons, should they be exposed to measles, can be facilitated by prior knowledge of their immune status. If susceptible, they should receive IG following exposure (see below).

Management of Patients with Contraindications to Measles Vaccine

If immediate protection against measles is required for persons for whom live measles virus vaccine is contraindicated, passive immunization with IG, 0.25 ml/kg (0.11 ml/lb) of body weight, should be given as soon as possible after known exposure (maximum dose—15 ml). It is important to note, however, that IG, which will usually prevent measles in normal children, may not be effective in children with acute leukemia or other conditions associated with altered immunity.

Measles – Continued

Simultaneous Administration of Vaccines

The simultaneous administration of MMR and OPV has resulted in seroconversion rates and rates of side effects that are similar to those observed when the vaccines are administered separately. Field experience and antibody data regarding simultaneous administration of DTP and measles vaccine indicate that the protective response is satisfactory and the incidence of side effects is not increased. Because of the limited accessibility of some population subgroups, the Committee recommends taking maximal advantage of each clinic visit to promptly vaccinate susceptible persons ≥15 months of age, including, if necessary, administering MMR, OPV, and DTP simultaneously. See ACIP statement, "**General Recommendations on Immunization.**"

MEASLES ELIMINATION

High priority is being placed on the elimination of indigenous measles transmission from the United States in 1982. The Measles Elimination Program was launched in 1978, and reported measles incidence rates reached record low levels in 1980 and 1981. The major components of the strategy to eliminate measles are achieving and maintaining high immunization levels, surveillance of disease, and prompt outbreak-control measures. The following recommendations are presented to help preserve the level of measles control already achieved, and to bring about the further reductions in morbidity that will be required to achieve elimination of indigenous measles transmission.

Ongoing Programs

The best means of reducing the incidence of measles is by having an immune population. Universal immunization as part of good health care should be accomplished through routine and intensive programs carried out in physicians' offices and public health clinics. Programs aimed at vaccinating children against measles at about 15 months of age should be established and maintained in all communities. In addition, all other persons thought to be susceptible, regardless of age, should be vaccinated when they are identified, unless vaccine is otherwise contraindicated.

Official health agencies should take whatever steps are necessary, including development and enforcement of school immunization requirements, to assure that all persons in schools (at all grade levels) and day-care settings are protected against measles. Enforcement of such requirements has been correlated with reduced measles incidence rates. Adequate evidence of immunity to measles should consist of either 1) a physician-documented history of measles disease, 2) laboratory evidence of measles immunity, or 3) a documented history of vaccination with live measles virus vaccine on or after the first birthday. Evidence of measles vaccination should be considered adequate only if the date of vaccination is provided.

Measles outbreaks have been and continue to be reported from places where young adults are concentrated, such as colleges. Measles control in these places may require careful evaluation of susceptibility and vaccination of those who are susceptible.

Measles outbreaks also have been and continue to be reported from places where preschool children are concentrated, such as day-care centers. Most states currently require evidence of immunity to measles for children enrolled in day-care centers. Measles control in preschool children requires careful evaluation of susceptibility and vaccination of those who are susceptible.

Concern is often expressed because of observations during outbreaks that cases occur in persons with a history of proper vaccination. Even under optimal conditions of storage and use, measles vaccine may have a 5% failure rate. A 90% or greater reduction in attack rates

Measles – Continued

has been demonstrated consistently in appropriately vaccinated persons when compared with others. As greater numbers of susceptibles become vaccinated and as the measles incidence rate is further reduced, there will be a relative increase in the proportion of cases seen among appropriately vaccinated persons.

Outbreak Control

All reports of suspected measles cases should be investigated rapidly. A measles outbreak exists in a community whenever a case is confirmed as measles. Once an outbreak occurs, preventing dissemination of measles depends on promptly vaccinating susceptible persons. Ideally, they will have been identified before the outbreak (by school record reviews, for example); if not, they must be quickly identified.

Speed in implementing control programs is essential in preventing the spread of measles. Control activities should not be delayed until laboratory results on suspected cases are received. All persons who cannot readily provide 1) a physician-*documented* history of measles, 2) laboratory evidence of measles immunity or 3) a *documented* history of vaccination with live measles virus vaccine on or after the first birthday should be vaccinated or excluded from school. Documentation of vaccination should be considered adequate only if the date of vaccination is provided. If a person's measles immunity is in doubt, he/she should be vaccinated.

(Continued on page 229)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		17th WEEK ENDING			CUMULATIVE, FIRST 17 WEEKS		
		May 1 1982	May 2 1981	MEDIAN 1977-1981	May 1 1982	May 2 1981	MEDIAN 1977-1981
Aseptic meningitis		70	66	50	1,252	1,082	805
Brucellosis		4	5	5	37	38	51
Encephalitis:	Primary (arthropod-borne & unspec.)	21	6	12	243	222	200
	Post-infectious	–	3	3	19	29	54
Gonorrhea:	Civilian	15,528	19,431	16,696	292,795	316,020	306,206
	Military	457	450	439	8,443	9,364	8,746
Hepatitis:	Type A	432	515	557	7,240	8,228	9,182
	Type B	412	430	337	6,463	6,240	5,228
	Non A, Non B	43	N	N	645	N	N
	Unspecified	163	192	179	2,973	3,437	3,283
Legionellosis		14	N	N	114	N	N
Leprosy		2	6	4	57	73	53
Malaria		30	26	16	239	397	158
Measles (rubeola)		53	135	771	460	1,053	6,188
Meningococcal infections:	Total	93	71	51	1,194	1,605	1,134
	Civilian	93	70	51	1,190	1,600	1,124
	Military	–	1	-	4	5	9
Mumps		176	105	359	2,444	1,784	6,694
Pertussis		34	18	20	359	342	342
Rubella (German measles)		82	80	452	893	946	5,476
Syphilis (Primary & Secondary):	Civilian	593	503	503	10,744	9,842	7,893
	Military	12	7	6	137	121	100
Tuberculosis		506	554	554	8,080	8,280	8,651
Tularemia		–	2	2	29	35	33
Typhoid fever		8	5	9	123	152	123
Typhus fever, tick-borne (RMSF)		10	25	9	41	52	32
Rabies, animal		150	213	150	1,847	2,385	1,413

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Calif. 1)	21	Paralytic	1
Cholera	–	Psittacosis (Mich. 1, Mo. 1, Ala. 1, Tex. 1, Calif. 2)	32
Congenital rubella syndrome	3	Rabies, human	–
Diphtheria	–	Tetanus (NYC 1, Ark. 1)	17
Leptospirosis	20	Trichinosis (Mass. 1, N.J. 1, Ohio 1)	38
Plague	2	Typhus fever, flea-borne (endemic, murine) (Ala. 1)	5

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 1, 1982 and May 2, 1981 (17th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	70	37	243	19	292,795	316,020	432	412	43	163	14	57
NEW ENGLAND	1	-	12	3	7,115	7,816	13	24	2	8	1	1
Maine	-	-	-	-	331	395	-	2	-	-	-	-
N.H.	-	-	-	-	207	276	3	1	-	-	-	-
Vt.	-	-	-	-	153	131	-	-	-	-	-	-
Mass.	-	-	4	-	3,239	3,277	5	9	1	6	-	-
R.I.	-	-	-	-	496	371	1	2	-	1	-	-
Conn.	1	-	6	3	2,689	3,366	4	10	1	1	1	1
MID. ATLANTIC	13	-	33	2	36,473	36,879	34	61	6	18	1	3
Upstate N.Y.	1	-	14	-	5,986	5,841	4	9	-	2	-	-
N.Y. City	10	-	8	-	15,423	15,402	20	35	-	11	-	1
N.J.	-	-	4	-	6,435	7,064	10	17	6	5	1	1
Pa.	2	-	7	2	8,629	8,572	U	U	U	U	-	1
E.N. CENTRAL	7	-	49	6	38,889	49,791	29	51	2	19	5	-
Ohio	2	-	16	4	12,135	17,581	11	30	1	8	5	-
Ind.	2	-	12	2	5,021	3,893	1	4	1	3	-	-
Ill.	-	-	-	-	7,586	13,706	6	4	-	2	-	-
Mich.	2	-	19	-	10,108	10,276	8	11	-	5	-	-
Wis.	1	-	2	-	4,039	4,335	3	2	-	1	-	-
W.N. CENTRAL	2	4	11	1	14,169	14,067	16	15	4	4	5	-
Minn.	-	-	-	1	2,111	2,317	2	3	-	-	-	-
Iowa	1	1	6	-	1,547	1,538	2	6	-	-	5	-
Mo.	-	1	3	-	6,462	6,040	7	4	1	2	-	-
N. Dak.	-	-	-	-	197	196	-	-	-	-	-	-
S. Dak.	-	-	-	-	399	413	-	-	-	-	-	-
Nebr.	-	-	1	-	895	1,123	-	-	-	-	-	-
Kans.	1	2	1	-	2,558	2,440	5	2	3	2	-	-
S. ATLANTIC	16	12	34	3	73,202	77,431	44	57	10	24	-	4
Del.	-	-	-	-	1,191	1,103	2	-	-	-	-	-
Md.	2	-	10	-	9,896	8,527	2	6	2	2	-	2
D.C.	-	-	-	-	3,978	4,994	-	-	-	-	-	-
Va.	1	4	9	-	6,569	7,220	3	4	3	1	-	-
W. Va.	-	-	-	-	879	1,180	-	2	-	-	-	-
N.C.	1	-	3	-	12,627	12,087	7	9	-	7	-	-
S.C.	2	2	-	-	7,238	7,206	3	4	-	1	-	-
Ga.	-	1	-	-	9,483	15,341	6	15	1	2	-	-
Fla.	10	5	12	3	21,341	19,773	21	17	4	11	-	2
E.S. CENTRAL	6	3	13	1	24,352	25,973	10	33	2	3	-	-
Ky.	1	-	-	-	3,315	3,383	7	8	-	1	-	-
Tenn.	3	1	9	-	9,454	9,635	-	9	1	-	-	-
Ala.	2	1	3	1	7,057	8,107	1	10	1	2	-	-
Miss.	-	1	1	-	4,526	4,848	2	6	-	-	-	-
W.S. CENTRAL	7	10	25	-	41,943	42,863	154	53	4	58	-	7
Ark.	-	3	2	-	3,502	2,935	4	2	-	2	-	-
La.	1	2	4	-	7,539	6,746	16	7	-	8	-	-
Okla.	1	3	6	-	4,525	4,281	36	10	4	9	-	-
Tex.	5	2	13	-	26,377	28,901	98	34	-	39	-	7
MOUNTAIN	-	-	13	1	10,959	12,775	42	16	1	8	2	1
Mont.	-	-	-	-	458	464	-	-	-	-	-	-
Idaho	-	-	-	-	503	521	-	-	-	-	-	1
Wyo.	-	-	-	-	288	273	11	-	-	-	-	-
Colo.	-	-	3	1	2,905	3,382	3	3	1	-	-	-
N. Mex.	-	-	-	-	1,364	1,383	9	1	-	-	-	-
Ariz.	-	-	6	-	3,030	4,114	4	8	-	5	2	-
Utah	-	-	-	-	487	587	7	2	-	2	-	-
Nev.	-	-	4	-	1,924	2,051	8	2	-	1	-	-
PACIFIC	18	8	51	2	45,693	47,825	90	102	12	21	-	41
Wash.	2	-	5	-	3,905	4,226	6	13	2	-	-	3
Oreg.	-	-	1	-	2,485	3,282	3	5	2	3	-	-
Calif.	16	7	43	2	37,370	38,104	79	77	8	18	-	23
Alaska	-	1	2	-	1,134	1,261	-	5	-	-	-	1
Hawaii	-	-	-	-	799	952	2	2	-	-	-	14
Guam	U	-	-	-	19	48	U	U	U	U	U	-
P.R.	-	-	1	-	923	1,055	2	4	-	4	-	-
V.I.	-	-	-	-	60	37	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	36	140	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United Sta:.es, weeks ending May 1, 1982 and May 2, 1981 (17th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	30	239	53	460	1,053	93	1,194	176	2,444	34	82	893	946
NEW ENGLAND	3	18	-	7	30	2	63	2	129	2	1	10	72
Maine	-	-	-	-	2	-	2	-	25	-	-	-	31
N.H.	-	1	-	1	5	-	10	-	12	-	-	8	27
Vt.	-	-	-	2	2	-	4	-	4	-	-	-	-
Mass.	3	13	-	2	15	-	16	1	68	2	1	2	8
R.I.	-	1	-	-	-	-	9	1	10	-	-	-	-
Conn.	-	3	-	2	6	2	22	-	10	-	-	-	6
MID. ATLANTIC	2	25	1	32	343	20	194	18	165	11	2	58	116
Upstate N.Y.	-	4	-	15	172	2	50	3	33	5	1	30	50
N.Y. City	2	10	1	15	27	10	38	4	28	6	-	16	25
N.J.	-	7	-	-	33	4	46	1	27	-	1	12	37
Pa.	-	4	-	2	111	4	60	10	77	-	-	-	4
E.N. CENTRAL	4	17	6	28	58	15	143	122	1,433	9	9	94	214
Ohio	2	5	-	-	15	7	57	94	1,048	-	-	-	-
Ind.	-	1	-	1	3	-	13	2	25	1	2	16	61
Ill.	-	1	-	12	14	3	31	21	90	8	1	23	58
Mich.	2	9	6	15	25	3	31	5	199	-	6	38	29
Wis.	-	1	-	-	1	2	11	-	71	-	-	17	66
W.N. CENTRAL	-	7	-	2	4	3	48	6	155	3	-	24	53
Minn.	-	-	-	-	1	-	9	3	78	1	-	3	7
Iowa	-	3	-	-	1	-	5	-	21	1	-	-	-
Mo.	-	1	-	2	-	1	17	-	13	-	-	15	2
N. Dak.	-	-	-	-	-	-	4	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	1	-	-	1	-
Nebr.	-	2	-	-	1	-	4	-	-	-	-	-	1
Kans.	-	1	-	-	1	2	8	3	42	1	-	5	43
S. ATLANTIC	5	40	1	27	248	18	246	4	155	2	7	28	84
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	-	6	-	2	1	2	11	-	12	-	5	10	1
D.C.	-	3	-	1	1	-	1	-	-	-	-	-	-
Va.	1	16	-	14	3	3	26	-	22	-	-	10	3
W. Va.	-	-	-	1	7	-	7	2	71	-	-	1	16
N.C.	-	-	-	-	3	3	38	-	5	-	-	-	4
S.C.	-	2	-	-	-	4	31	-	9	-	-	1	6
Ga.	2	4	-	-	80	1	62	1	4	2	-	1	21
Fla.	2	9	1	9	153	5	70	1	29	-	2	5	33
E.S. CENTRAL	-	1	-	5	-	7	77	1	25	-	1	31	18
Ky.	-	1	-	1	-	3	11	1	9	-	1	16	11
Tenn.	-	-	-	4	-	2	31	-	9	-	-	-	7
Ala.	-	-	-	-	-	1	31	-	4	-	-	-	-
Miss.	-	-	-	-	-	1	4	-	3	-	-	15	-
W.S. CENTRAL	5	13	3	16	179	10	155	8	91	1	4	59	59
Ark.	-	1	-	-	-	1	8	1	5	-	-	-	-
La.	-	2	-	-	-	4	24	2	3	-	-	-	8
Okla.	-	-	-	-	5	-	10	-	-	-	-	2	-
Tex.	5	10	3	16	174	5	113	5	83	1	4	57	51
MOUNTAIN	1	6	-	-	17	4	73	1	38	1	1	26	52
Mont.	-	-	-	-	-	-	4	-	3	-	-	3	1
Idaho	-	-	-	-	-	-	5	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	1	5	1
Colo.	1	4	-	-	4	2	27	1	7	-	-	1	26
N. Mex.	-	1	-	-	2	-	10	-	-	-	-	2	3
Ariz.	-	1	-	-	2	-	14	-	13	-	-	5	11
Utah	-	-	-	-	-	2	6	-	9	1	-	8	3
Nev.	-	-	-	-	9	-	3	-	2	-	-	2	5
PACIFIC	10	112	42	343	174	14	195	14	253	5	57	563	278
Wash.	-	6	-	15	1	1	22	1	40	-	3	19	39
Oreg.	-	3	-	-	-	3	38	-	-	-	1	3	31
Calif.	10	101	42	326	171	9	125	12	205	5	53	533	204
Alaska	-	-	-	-	-	-	7	1	6	-	-	1	-
Hawaii	-	2	-	2	2	1	3	-	2	-	-	7	4
Guam	U	2	U	1	4	U	-	U	1	U	U	1	-
P.R.	2	4	-	51	133	-	3	2	25	-	1	4	3
V.I.	-	-	-	-	6	-	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 1, 1982 and May 2, 1981 (17th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	10,744	9,842	506	8,080	29	8	123	10	41	1,847
NEW ENGLAND	202	212	18	225	-	-	11	-	-	5
Maine	1	1	1	17	-	-	-	-	-	5
N.H.	-	9	-	9	-	-	-	-	-	-
Vt.	-	11	-	6	-	-	2	-	-	-
Mass.	145	130	14	155	-	-	8	-	-	-
R.I.	12	14	-	8	-	-	-	-	-	-
Conn.	44	47	3	30	-	-	1	-	-	-
MID. ATLANTIC	1,469	1,521	69	1,359	2	3	15	-	-	32
Upstate N.Y.	143	140	13	242	2	-	2	-	-	17
N.Y. City	905	949	30	523	-	3	11	-	-	-
N.J.	172	183	15	258	-	-	2	-	-	1
Pa.	249	249	11	336	-	-	-	-	-	14
E.N. CENTRAL	536	663	105	1,270	-	-	11	-	-	222
Ohio	105	86	16	228	-	-	6	-	-	30
Ind.	78	44	23	171	-	-	-	-	-	37
Ill.	219	390	35	481	-	-	1	-	-	92
Mich.	97	111	29	316	-	-	4	-	-	1
Wis.	37	32	2	74	-	-	-	-	-	62
W.N. CENTRAL	212	175	16	248	6	-	3	-	1	425
Minn.	35	63	-	43	-	-	-	-	-	75
Iowa	11	9	2	35	-	-	1	-	-	142
Mo.	129	87	11	115	5	-	1	-	1	52
N. Dak.	4	2	-	5	-	-	-	-	-	45
S. Dak.	-	2	-	6	-	-	-	-	-	18
Nebr.	7	3	1	9	-	-	-	-	-	44
Kans.	26	9	2	35	1	-	1	-	-	49
S. ATLANTIC	2,971	2,586	108	1,596	6	2	17	3	17	299
Del.	7	7	-	18	-	-	-	-	-	-
Md.	168	206	9	197	1	1	5	-	7	16
D.C.	190	232	4	59	-	-	-	-	-	-
Va.	211	246	22	182	1	-	2	-	-	146
W. Va.	8	7	2	40	-	-	2	-	-	14
N.C.	218	195	12	252	-	-	-	1	5	8
S.C.	142	181	6	155	3	-	2	1	4	21
Ga.	632	660	23	234	-	-	-	1	1	73
Fla.	1,395	850	30	459	1	1	6	-	-	21
E.S. CENTRAL	775	647	57	733	4	1	10	-	5	227
Ky.	38	24	21	207	-	-	-	-	-	41
Tenn.	216	254	16	251	4	-	2	-	1	155
Ala.	265	173	6	206	-	1	7	-	3	31
Miss.	256	196	14	69	-	-	1	-	1	-
W.S. CENTRAL	2,701	2,337	45	861	7	2	8	7	17	368
Ark.	77	42	6	88	5	-	1	-	2	52
La.	583	517	-	146	-	-	-	-	-	8
Okla.	58	66	10	129	2	-	2	4	7	82
Tex.	1,983	1,712	29	498	-	2	5	3	8	226
MOUNTAIN	286	237	27	244	3	-	5	-	-	43
Mont.	1	8	2	18	-	-	-	-	-	19
Idaho	16	2	-	10	1	-	-	-	-	-
Wyo.	9	3	-	2	1	-	-	-	-	2
Colo.	84	78	5	31	-	-	1	-	-	-
N. Mex.	61	53	5	44	-	-	-	-	-	5
Ariz.	63	51	10	100	-	-	3	-	-	17
Utah	10	5	2	13	1	-	1	-	-	-
Nev.	42	37	3	26	-	-	-	-	-	-
PACIFIC	1,592	1,464	61	1,544	1	-	43	-	1	226
Wash.	41	55	1	89	1	-	2	-	-	-
Oreg.	45	33	2	57	-	-	1	-	-	-
Calif.	1,464	1,341	45	1,276	-	-	39	-	1	164
Alaska	6	4	-	18	-	-	-	-	-	62
Hawaii	36	31	13	104	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	188	245	U	101	-	-	1	-	-	17
V.I.	-	2	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending May 1, 1982 (17th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	669	474	139	28	12	15	47
Boston, Mass.	156	97	41	7	5	6	17
Bridgeport, Conn.	56	44	7	3	1	1	3
Cambridge, Mass.	20	16	4	-	-	-	5
Fall River, Mass.	32	23	9	-	-	-	-
Hartford, Conn.	65	38	19	3	2	3	2
Lowell, Mass.	32	25	5	1	1	-	2
Lynn, Mass.	27	17	8	2	-	-	3
New Bedford, Mass.	23	20	2	1	-	-	1
New Haven, Conn.	59	39	13	4	2	1	1
Providence, R.I. §	53	49	-	1	1	1	5
Somerville, Mass.	6	5	1	-	-	-	-
Springfield, Mass.	44	29	10	4	-	1	2
Waterbury, Conn.	48	35	12	-	-	1	3
Worcester, Mass.	48	37	8	2	-	1	3
MID. ATLANTIC	2,594	1,734	607	146	52	55	120
Albany, N.Y.	34	22	9	-	2	1	1
Allentown, Pa.	20	17	3	-	-	-	2
Buffalo, N.Y.	150	103	32	5	5	5	9
Camden, N.J.	41	20	17	3	-	1	-
Elizabeth, N.J.	19	10	7	1	-	1	2
Erie, Pa.†	45	33	10	2	-	-	3
Jersey City, N.J.	47	25	13	4	2	3	2
N.Y. City, N.Y.	1,418	937	336	95	26	24	43
Newark, N.J.	59	27	21	9	2	-	2
Paterson, N.J.	27	18	5	1	2	1	4
Philadelphia, Pa.†	223	137	60	10	9	7	18
Pittsburgh, Pa.†	88	59	23	3	-	3	2
Reading, Pa.	33	28	3	1	-	1	5
Rochester, N.Y.	123	90	23	6	1	3	9
Schenectady, N.Y.	25	16	6	1	1	1	1
Scranton, Pa.†	33	27	5	1	-	-	1
Syracuse, N.Y.	88	65	17	2	2	2	7
Trenton, N.J.	49	39	7	1	-	2	3
Utica, N.Y.	39	35	4	-	-	-	4
Yonkers, N.Y.	33	26	6	1	-	-	2
E.N. CENTRAL	2,270	1,478	490	141	61	99	63
Akron, Ohio	72	57	8	3	2	2	-
Canton, Ohio	56	37	15	1	2	1	2
Chicago, Ill.	520	305	125	50	23	17	7
Cincinnati, Ohio	110	77	17	2	4	10	11
Cleveland, Ohio	181	97	56	15	3	10	2
Columbus, Ohio	135	88	27	7	4	9	4
Dayton, Ohio	94	54	32	4	2	2	3
Detroit, Mich.	340	208	71	35	9	17	6
Evansville, Ind.	49	38	7	1	-	3	1
Fort Wayne, Ind. §	52	50	1	-	-	1	3
Gary, Ind.	21	13	5	-	1	2	-
Grand Rapids, Mich.	50	35	9	1	1	4	3
Indianapolis, Ind.	140	89	36	2	2	11	1
Madison, Wis.	35	25	5	3	2	-	4
Milwaukee, Wis.	149	108	32	4	2	3	2
Peoria, Ill.	38	23	9	4	1	1	6
Rockford, Ill.	41	31	8	-	1	1	2
South Bend, Ind.	44	32	8	3	-	1	2
Toledo, Ohio §	88	80	1	2	1	3	2
Youngstown, Ohio	55	31	18	4	1	1	2
W.N. CENTRAL	721	501	147	30	17	26	33
Des Moines, Iowa	61	45	13	1	1	1	1
Duluth, Minn.	26	20	5	1	-	-	3
Kansas City, Kans.	42	26	10	1	2	3	2
Kansas City, Mo.	112	83	17	4	4	4	8
Lincoln, Nebr.	56	39	14	2	-	1	4
Minneapolis, Minn.	79	54	13	5	2	5	1
Omaha, Nebr.	101	71	17	7	1	5	1
St. Louis, Mo.	126	83	32	4	6	1	7
St. Paul, Minn.	71	53	15	2	-	1	3
Wichita, Kans.	47	27	11	3	1	5	3
S. ATLANTIC	1,254	764	321	94	33	41	41
Atlanta, Ga.	148	92	34	10	5	7	3
Baltimore, Md.	347	216	84	34	7	6	6
Charlotte, N.C.	74	36	26	4	4	4	1
Jacksonville, Fla.	86	53	25	6	1	1	4
Miami, Fla.	78	48	20	6	2	2	2
Norfolk, Va.	56	30	16	4	2	4	1
Richmond, Va.	72	44	18	3	3	4	4
Savannah, Ga.	31	17	12	2	-	-	1
St. Petersburg, Fla.	99	79	11	4	2	3	2
Tampa, Fla.	52	38	11	2	1	-	4
Washington, D.C.	167	85	53	15	4	9	8
Wilmington, Del.	44	26	11	4	2	1	5
E.S. CENTRAL	740	477	180	40	16	27	30
Birmingham, Ala.	113	73	24	8	5	3	4
Chattanooga, Tenn.	46	25	17	3	-	1	5
Knoxville, Tenn.	49	32	13	3	1	-	1
Louisville, Ky.	94	60	24	5	1	4	4
Memphis, Tenn.	202	129	50	12	6	5	8
Mobile, Ala.	47	30	8	3	1	5	1
Montgomery, Ala.	51	29	15	1	-	6	2
Nashville, Tenn.	138	99	29	5	2	3	5
W.S. CENTRAL	1,288	731	326	114	60	57	31
Austin, Tex.	58	40	9	5	1	3	1
Baton Rouge, La.	29	17	6	1	1	4	1
Corpus Christi, Tex.	46	28	13	1	1	3	1
Dallas, Tex.	184	104	56	12	8	4	4
El Paso, Tex.	46	23	12	5	4	2	1
Fort Worth, Tex.	82	54	16	6	2	4	6
Houston, Tex.	333	159	87	47	22	18	3
Little Rock, Ark.	64	32	23	3	4	2	4
New Orleans, La.	121	75	31	7	3	5	-
San Antonio, Tex.	176	109	38	17	6	6	5
Shreveport, La.	49	27	13	3	3	3	-
Tulsa, Okla.	100	63	22	7	5	3	9
MOUNTAIN	647	387	153	42	24	41	34
Albuquerque, N.Mex.	74	40	18	10	2	4	6
Colo. Springs, Colo.	36	26	6	1	1	2	3
Denver, Colo.	146	87	37	10	1	11	6
Las Vegas, Nev.	65	37	19	3	2	4	4
Ogden, Utah	23	13	5	2	1	2	1
Phoenix, Ariz.	155	88	37	11	11	8	4
Pueblo, Colo.	17	12	5	-	-	-	2
Salt Lake City, Utah	53	32	6	2	4	9	1
Tucson, Ariz.	78	52	20	3	2	1	7
PACIFIC	1,872	1,379	278	83	60	56	113
Berkeley, Calif.	23	16	4	2	1	-	2
Fresno, Calif.	54	40	7	4	3	-	6
Glendale, Calif. §	25	25	-	-	-	-	1
Honolulu, Hawaii	54	32	15	4	1	2	4
Long Beach, Calif.	95	72	14	5	1	3	2
Los Angeles, Calif. §	581	522	4	9	18	13	24
Oakland, Calif.	77	46	22	4	3	2	4
Pasadena, Calif.	27	21	3	1	1	1	1
Portland, Oreg.	148	87	35	10	5	10	5
Sacramento, Calif.	78	49	19	4	2	4	8
San Diego, Calif.	150	99	31	9	6	5	12
San Francisco, Calif.	150	103	32	7	3	5	9
San Jose, Calif.	183	122	38	13	8	2	20
Seattle, Wash.	125	75	34	7	3	6	5
Spokane, Wash.	51	36	9	1	3	2	5
Tacoma, Wash.	51	34	11	3	2	1	5
TOTAL	12,055††	7,925	2,641	718	335	417	512

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Measles – Continued

An effective means of terminating school outbreaks and increasing rates of immunization quickly is to exclude all children or adolescents who cannot present valid evidence of immunity through vaccination or prior disease. Experience with outbreak control indicates that almost all students who are excluded from school because they lack evidence of immunity to measles, quickly comply with requirements and are promptly readmitted to school. Exclusion should include pupils who have been exempted from measles vaccination because of medical, religious or other reasons. Exclusion should continue until at least 2 weeks after the onset of rash of the last case of measles in the community. Less rigorous approaches such as voluntary appeals for vaccination have not been effective in terminating outbreaks.

Recent studies have indicated that some persons vaccinated before 11 months of age may have a less predictable immune response to measles vaccine when revaccinated on or after the first birthday. Approximately 50% of infants who failed to seroconvert initially will, after revaccination, develop HI antibody that is persistent; the remaining 50% will not develop sustained levels of HI antibody. Evaluations in 1 study showed that all these children, whether HI antibody negative or positive, had antibody detectable by a sensitive neutralization test. There is no evidence to indicate that these children are susceptible to measles.

The risk of measles complications resulting from measles is high among infants less than 1 year of age. Therefore, considering the benefits and risks, the Committee recommends that infants as young as 6 months of age may be vaccinated as pre-exposure prophylaxis when exposure to natural measles is considered likely. Because infants vaccinated before the first birthday have a significantly lower rate of seroconversion, they should be revaccinated when they are about 15 months old to ensure protection.

IG should not be used in an attempt to control measles outbreaks.

Importations

Measles importations are a continuing source of reported measles cases in the United States. With the recent substantial decline in measles incidence, the proportion of reported cases that are due to importations has increased. Although most imported measles cases result in limited transmission, several large outbreaks have occurred recently. Because of the possibility of multistate outbreaks if exposure of susceptible persons to a patient occurs on a common carrier, such as an airplane, rapid reporting of such imported cases to state and local health departments is important so that other state health departments can be notified to identify exposed contacts as well as to initiate surveillance and control measures.

International Travel

Persons born after 1956 who travel abroad should be protected against measles, since measles is endemic in many countries throughout the world. No immunization or record of immunization is required for entry into the United States. However, it is recommended that international travelers should have immunity to measles consisting of physician's verification of prior measles disease, laboratory evidence of measles immunity, or verified measles vaccination on or after the first birthday. Since the risk of serious complications and death is greater for adults, it is especially important to protect young adults who have escaped measles disease and have not been vaccinated. Most persons born before 1957 need not be considered susceptible.

SURVEILLANCE

As the incidence rate of measles declines in the United States, aggressive surveillance becomes increasingly important. Known or suspected measles cases should be reported im-

Measles – Continued

mediately to local health departments. Serologic confirmation should be attempted for every suspected case of measles that cannot be linked to a confirmed case. Measles infection can be serologically confirmed by a 4-fold rise in CF or HI antibody titer. The acute-phase serum specimen should be drawn as soon after rash onset as possible, preferably within the first 7 days after rash onset. The convalescent-phase serum specimen should be drawn 10 or more days after the acute-phase serum specimen. If the acute-phase specimen is drawn more than 7 days after rash onset, a 4-fold rise in antibody titer may not be apparent. Occassionally 4-fold rises may not be detected even if the first specimen is drawn within the first 7 days after rash onset. Measles infection may also be serologically confirmed by demonstrating measles-specific IgM antibody. A single serum specimen should be drawn between 1 and 2 weeks after rash onset. Although measles-specific IgM antibody may be detected shortly after rash onset, false negative results may occur if the specimen is drawn earlier than 1 week or later than 2 weeks following rash onset. Reporting of suspect cases and implementation of outbreak-control activities should not be delayed while awaiting laboratory results.

Effective surveillance of measles and its complications can delineate inadequate levels of protection, further define groups needing special attention, and assess the effectiveness of control activities. Continuous and careful review of adverse events following measles vaccination is also important. All adverse events following vaccination should be evaluated and reported in detail to local and state health officials as well as to the manufacturer.

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Current Trends

Childhood Immunization Initiative, United States — 5-Year Follow-Up

In 1977, approximately 20 million of the 50 million persons in the United States who were <15 years old were estimated to need at least 1 dose of 1 vaccine in order to be considered fully protected against the 7 diseases for which vaccines are routinely administered in childhood—i.e., diphtheria, measles, mumps, pertussis, poliomyelitis, rubella, and tetanus. To remedy this situation, the Department of Health, Education, and Welfare (now Department of Health and Human Services) announced, on April 6, 1977, a nationwide Childhood Immunization Initiative. The Initiative had 2 stated objectives: 1) To attain immunization levels in the nation's children of at least 90% by October 1979. 2) To establish mechanisms to maintain high immunization levels by ensuring that children received vaccinations at the proper times.

The Initiative mobilized the public as well as the private sectors with extensive involvement by volunteers and voluntary organizations, including a major public information and education campaign. More than 28 million individual immunization records of school children were reviewed to identify children in need of vaccinations and to refer them for these vaccinations. School immunization requirements were enacted and enforced by state and local governments. Government agencies that had not formerly been involved in immunization activities established standards for immunization levels among their constituents. A major increase in federal support for immunization grant programs helped to eliminate the backlog of unimmunized and incompletely immunized children and to create systems to maintain high levels of immunization.

The results of the Childhood Immunization Initiative are reflected in the following: 1) Immunization levels of children entering school for the first time in the fall of 1980 were 96% for measles, rubella, and diphtheria-tetanus-pertussis (DTP); 95% for poliomyelitis; and 92% for mumps. Immunization levels of children entering school for the first time in 1981 are not yet available. 2) Disease incidences are at or near record low levels. In 1981, provisional data indicate that measles, mumps, paralytic poliomyelitis, rubella, and tetanus all reached record low

Childhood Immunization – Continued

levels, with diphtheria and pertussis being at near record low levels (Table 1). 3) All 50 states now have laws requiring documentation of immunity as a condition of first entry to school. For measles, in 40 states these laws extend from kindergarten through 12th grade. 4) In all 50 states, a standard immunization record has been developed and distributed for use in both the public and private sector to ease problems of documention of immunizations. 5) In 35 states, systems have been instituted in public clinics throughout the state to ensure that children actually receive needed vaccinations. This involves scheduling visits for immunizations and recalling children who fail to come in for these visits. 6) In 15 states, hospital-based maternal education programs have been implemented to provide new mothers in over 90% of targeted hospitals with information about vaccinations before they are discharged with their infants. 7) The initial success in the Childhood Immunization Initiative was so encouraging that a new target was enunciated—i.e., the elimination of indigenous measles from the United States by fall of 1982. As documented in numerous previous articles, this program is proceeding on schedule. 8) Since 1978 approximately 120,000,000 doses of childhood vaccines have been administered by the public sector.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

TABLE 1. Reported incidence of vaccine-preventable diseases, United States, 1980-1981

	1981* (Percentage decrease)		1980
Diphtheria	4		3
Measles†	3,032	(↓77%)	13,506
Mumps†	4,729	(↓45%)	8,576
Pertussis	1,189	(↓31%)	1,730
Poliomyelitis† (paralyic)	6		8
Rubella†	2,060	(↓47%)	3,904
Tetanus†	60	(↓37%)	95

†Record low

*Provisional

Problems Encountered with Using Fansidar as Prophylaxis for Malaria

The drug combination Fansidar* (sulfadoxine-pyrimethamine) has recently become commercially available in the United States. Since the drug was licensed, CDC has received numerous inquiries seeking clarification about the use of Fansidar as prophylaxis for malaria. The case histories of the 2 patients discussed below illustrate some important points that need clarification.

Patient 1: On August 4, 1981, a 38-year-old male geologist was seen in a clinic in Toronto, Canada, with a history of recurrent fever and chills since July 15, 1981. The patient had traveled through the savannah and rain-forest areas of Peru and parts of the Bolivian altiplano in the period April 7-May 15, 1981. He had then returned to Canada for several weeks,

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*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Fansidar – Continued

but spent an additional week between June 8 and 15 in a tropical rain-forest region of Brazil. He had no other history of foreign travel. The patient had begun taking Fansidar 2 weeks before his initial trip to South America, and had continued to take 1 tablet/week until his first clinic visit 6 weeks after he returned from Brazil. He denied having missed any doses.

At the time of his clinic visit, a peripheral blood smear contained *Plasmodium vivax* parasites. He was given a therapeutic course of chloroquine and primaquine, rapidly became asymptomatic, and continued to be asymptomatic when examined 2 months after the therapy.

Patient 2: A 28-year-old male geologist returned to Canada on November 24, 1981, after a 2-month stay in southwestern Brazil. He had begun taking chloroquine phosphate (500 mg) and 1 tablet of Fansidar/week beginning 1 week before he left for Brazil. He continued to take both drugs once a week without interruption. One week before returning to Canada, he began having episodes of fever and sweating that recurred every 48 hours. He was admitted to a hospital in Toronto on November 28, 1981.

The only notable finding on physical examination was splenomegaly. Blood smears contained *P. falciparum* ring forms, with 1% of red blood cells infected. Malaria indirect fluorescent antibody titers obtained 1 month after diagnosis were 1,024 and 16 for *P. falciparum* and *P. vivax*, respectively. These results were compatible with a recent *falciparum* infection. A serum sulfonamide level obtained at the time of diagnosis was consistent with the prophylaxis history.

The patient was then treated with quinine sulfate, 600 mg every 8 hours for 3 days, and tetracycline, 500 mg every 6 hours for 10 days. His parasitemia and fever resolved within 48 hours after this therapy began.

Reported by JS Keystone, MD, J Yang, PhD, L McIntyre, MD, SL Chee, RT, Tropical Disease Unit, Toronto General Hospital, AS Macpherson, MD, Office of Health, City of Toronto, Canada; Malaria Br, Div of Parasitic Diseases, Center for Infectious Diseases, CDC.

Editorial Note: CDC concurs with the recently published recommendations of the World Health Organization stating that the sole indication for the use of Fansidar is the prophylaxis or treatment of chloroquine-resistant *P. falciparum* malaria (*1*). Some information contained in the package insert distributed with the drug in the United States is inconsistent with published data on the use and efficacy of Fansidar. The cases described above illustrate several of these discrepancies.

Although patient 1 took Fansidar as malaria prophylaxis, he still developed *P. vivax* infection. The package insert states that the drug is indicated for the treatment or prophylaxis of "susceptible strains of *Plasmodia*." In fact, while Fansidar has been efficacious in the treatment or prophylaxis of chloroquine-resistant *P. falciparum*, it cannot be recommended as the sole prophylactic drug for the other 3 species of human malaria. Specifically, there is now considerable evidence that Fansidar is not the most effective drug for treatment or prophylaxis of *P. vivax* infections (*2,3*). This inefficacy of Fansidar is related to the widespread resistance of *P. vivax* to pyrimethamine. The effectiveness of Fansidar against *P. ovale* and *P. malariae* has not been adequately evaluated. Chloroquine remains the drug of choice for the prophylaxis of malaria in areas with transmission of any malaria species other than *P. falciparum*. CDC recommends that travelers who will be exposed both to chloroquine-resistant *P. falciparum* and to other species of malaria take chloroquine plus Fansidar as prophylaxis.

The infection acquired by the second patient raises the question of Fansidar resistance. Drug resistance of the parasite is generally implied when malaria parasitemia develops in a patient taking prophylaxis or when parasitemia fails to be eradicated following drug therapy. However, it has been demonstrated that drug combinations such as Fansidar may not supp-

Fansidar – Continued

ress or cure infections (with sensitive strains of malaria) due to a host-drug interaction that impairs the drug action on the parasite (*4*). The exact mechanism of "host-failure" in the case of Fansidar-like drugs is not yet known, but is not correlated with serum drug levels (*5-6*).

The ineffectiveness of Fansidar in treating malaria has been reported to be highly prevalant along the Thai-Kampuchean border (*7*). As-yet-unpublished data documenting Fansidar treatment failures in Brazil are being accumulated. There is currently no *in vitro* method to test for Fansidar resistance. Therefore, the distinction between parasite drug resistance and host failure can only be inferred epidemiologically. Whether patient 2 was infected with a truly resistant strain of parasite or whether host failure occurred cannot be determined. This case history does, however, illustrate the fact that *P. falciparum* from widely dispersed geographic areas can be resistant to multiple drugs including Fansidar, and that a febrile illness experienced by a traveler may well be malaria, despite a history of appropriate prophylaxis.

The 2 patients discussed above were effectively treated following the failure of their prophylaxis regimens. The first patient was appropriately treated with primaquine in order to prevent a relapse of the *P. vivax* infection. Indeed, patients with documented *P. vivax* or *P. ovale* infection are candidates for primaquine therapy. In contrast to this therapeutic use of primaquine, the Fansidar package insert states that prophylaxis with Fansidar should be followed by a "regimen of primaquine." Since the only demonstrated indication for using Fansidar prophylaxis is for suppression of infections with *P. falciparum* (a non-relapsing species of malaria), there is little basis for the routine prophylactic use of primaquine following Fansidar. When primaquine is considered for terminal prophylaxis, an assessment of the intensity and duration of exposure to relapsing malaria should be made, as well as the potential risk of primaquine toxicity, especially when treating persons who may be deficient in glucose-6 -phosphate dehydrogenase (G6PD). Indeed, patients with documented *P. vivax* or *P. ovale* infection are candidates for primaquine.

In order to clarify these and other current issues regarding malaria proplylaxis and treatment, the CDC Malaria Branch has prepared an MMWR supplement entitled *Prevention of Malaria in Travelers, 1982*. This document is designed for use by medical and public health personnel who have responsibility for advising travelers. It will not be distributed automatically to all MMWR subscribers; however, copies can be obtained by writing to Chief, Malaria Branch, Division of Parasitic Diseases, Center for Infectious Diseases, CDC, Atlanta, Georgia 30333.

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Epidemiologic Notes and Reports

Update on Contaminated Prepodyne Solution

CDC has confirmed contamination of 2 additional lots of Prepodyne Solution (manufactured by West Chemical, Inc.) (*1*).* Lot C203137 (1-pint bottles) is contaminated with *Pseudomonas aeruginosa*, and lot C203197 (1-pint bottles) is contaminated with an unidentified gram-negative rod. One lot (C203197) was not distributed, and the other was distributed only to 2 hospitals. The distributor (AMSCO/Medical Products Division of American Sterilizer Co.) has notified the 2 hospitals that received the contaminated lot concerning the recent laboratory results. Currently, the company is performing microbiologic sampling of lots manufactured since August 1981 and of new lots before they are released. No additional incidence of patient infection has been reported to be associated with the use of Prepodyne Solution. Investigation by CDC and FDA is continuing.

Reported by Hospital Infections Program, Hepatitis and Viral Enteritis Div, Center for Infectious Diseases, CDC.

Reference

1. CDC. *Pseudomonas aeruginosa* peritonitis attributed to a contaminated iodophor solution—Georgia. MMWR 1982;31:197-8.

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*Use of trade names is for identification only and does not imply endorsement by the Public Health Serivce or the U.S. Department of Health and Human Services.

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The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Current Trends

Tuberculosis among Hispanics in the United States — 1980

In 1980, 46 states, New York City, and Washington, D.C., reported 3,099 cases of tuberculosis among Hispanic persons; this figure represents 12.6% of the 24,662 cases in these areas that year. Four states did not submit data on Hispanic ethnicity.

Relatively more Hispanic than other patients were in younger age groups. Forty-nine percent of the Hispanic patients were <35 years of age, compared with 25% of other tuberculosis patients from these areas. The overall case rate calculated for Hispanics (23.2/100,000 population) was twice that for other persons (11.7/100,000). Among persons <35 years of age, the age-specific incidence of tuberculosis among Hispanics ranged from 2.7 to 4.2 times that for other persons (Table 1). About 62% of the Hispanic patients were males, a sex distribution comparable with that for other persons in these areas. The proportion of pulmonary cases among Hispanics and other persons did not differ significantly—85% and 86%, respectively.

Most of the Hispanic patients were concentrated in a few areas: California and Texas accounted for 42% and 26%, respectively, of the total (Table 2). Twenty-seven states and

TABLE 1. Tuberculosis case rates* by age and ethnicity, United States,† 1980

Age (in years)	Hispanics	Other	Relative Risk
0-4	13.3	4.9	2.7
5-9	7.5	2.1	3.6
10-14	4.0	1.3	3.1
15-19	10.7	2.7	4.0
20-24	26.7	6.3	4.2
25-34	28.2	8.9	3.2
35-44	26.3	13.2	2.0
45-54	37.1	18.0	2.1
55-64	49.2	19.9	2.5
>65	65.8	30.6	2.2
Total	23.2	11.7	2.0

*Cases/100,000 population.
†Data for New Jersey, New York, Ohio, and Virginia not available.

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Tuberculosis – Continued

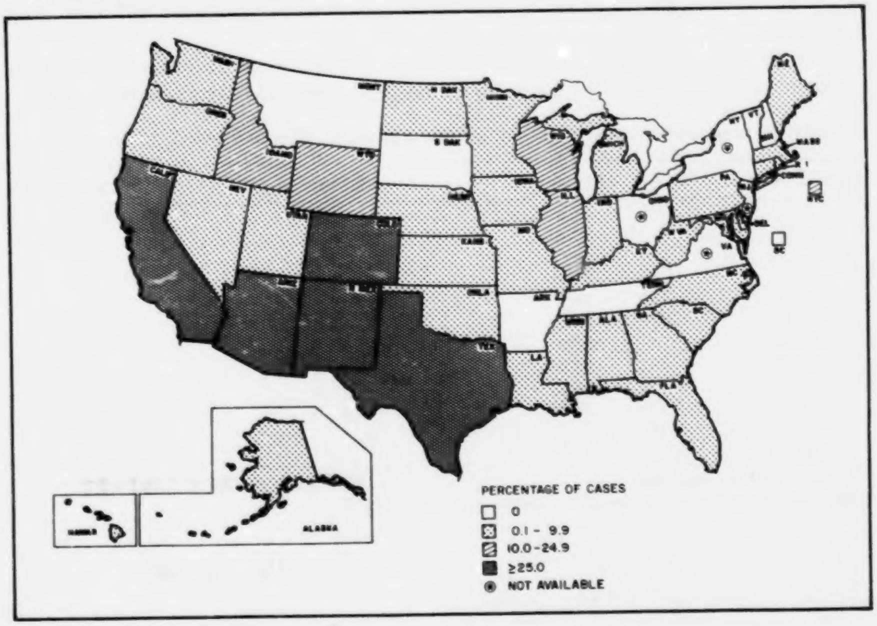
Washington, D.C., each reported 5 or fewer Hispanic patients with tuberculosis. In each of 5 southwestern states, Hispanic patients comprised over 25% of reported cases (Figure 1).

The tuberculosis case rate was higher for Hispanic persons living in cities with populations of 250,000 or more (25.4/100,000) than for Hispanic persons living elsewhere (20.6/100,000). Several cities reported a large number of cases among Hispanics (Los Angeles, 340; New York, 260; Houston, 135; Chicago, 112; San Antonio, 85; Miami, 78; El

TABLE 2. Hispanic persons with tuberculosis by state, United States, 1980

State	Number	Percentage
California	1,304	42.1
Texas	794	25.6
New York City	260	8.4
Illinois	149	4.8
Florida	115	3.7
Arizona	94	3.0
All others	383	12.4
Total	3,099	100.0

FIGURE 1. Percentage of each state's reported tuberculosis patients of Hispanic ethnicity, United States, 1980



Tuberculosis – Continued

Paso, 71; San Jose, 61; and San Diego, 54). Hispanic patients accounted for almost four-fifths of the reported cases in El Paso and almost two-thirds of the reported cases in San Antonio and Albuquerque.

Additional information on Hispanic patients was available from 10 states (Connecticut, Illinois, Indiana, Maine, Mississippi, Nevada, Oklahoma, South Carolina, Washington, and Wisconsin) and 3 large cities (Miami-Dade County, New York, and St. Louis). Of the totals reported for these areas, 569 (10.1%) of the 5,635 patients were Hispanic (ranging from 19% in Dade County to < 1% in Mississippi, South Carolina, St. Louis, and Washington, D.C.). The place of origin for 305 (53.6%) of the Hispanic patients from these areas was outside the 50 states and Washington, D.C. Forty-three percent of the 260 patients for whom the year of arrival in the United States was known arrived after 1975.

Reported by the Tuberculosis Control Div, Center for Prevention Svcs, CDC.

Editorial Note: Information about the Hispanic ethnicity of patients with tuberculosis was collected for the first time in 1980. Data on race and ethnicity were collected in separate questions so that race-specific and ethnicity-specific rates could be calculated. Alternative methods of data collection that use, among others, the categories of "white, not Hispanic," "black, not Hispanic," and "Hispanic," do not permit calculation of race-specific rates.

The categorization of persons by ethnic group or race is difficult because precise boundaries for categories are difficult to define and are cumbersome. For the tuberculosis patients reported in 1980, states were requested to use the following guidelines:

> Hispanics are persons of Spanish origin, descent, or culture, regardless of race. Most persons of Mexican, Puerto Rican, Cuban, and Central or South American culture or origin are Hispanic; however, persons of Portuguese culture or origin are not, and persons from Brazil, Guyana, Surinam, Trinidad and Tobago may not be. When in doubt, the category that most closely reflects the individual's recognition in his/her community should be used for counting purposes.

This definition is consistent with federal guidelines concerning the collection of data on Hispanic persons and approximates the suggested definition of "Spanish Origin" used by the Bureau of the Census (*1*).

It has been suggested that these definitions are not appropriate because they include some European groups (e.g., Spaniards) and exclude some American groups (e.g., Brazilians); a different category, such as "Latin American," might be more appropriate for epidemiologic studies and other purposes (*2*). Nevertheless, the definition above permits a reasonably accurate estimate of the rates of disease among "Hispanic" persons. The data indicate that Hispanics presently are and likely will remain, for at least several decades, at significantly higher risk of having tuberculosis than most other persons in the United States.

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Notice to Readers

The following article is part of a continuing series planned to accompany Table V, which appears once a month in the MMWR. These articles, to be published under the heading "Perspectives in Disease Prevention and Health Promotion," will explore different aspects of preventable problems that can lead to morbidity and premature death.

Perspectives in Disease Prevention and Health Promotion

Unintentional and Intentional Injuries — United States

Injuries rank as the fourth leading cause of death in the United States, exceeded only by heart diseases, malignant neoplasms, and cerebrovascular diseases. In terms of years of life lost prematurely, however, injuries rank first (*1*). In the United States alone in 1980, there were over 70 million injuries and 150,000 unintentional and intentional injury-related deaths.

(Continued on page 246)

TABLE I. Summary — cases of specified notifiable diseases, United States

DISEASE	18th WEEK ENDING			CUMULATIVE, FIRST 18 WEEKS		
	May 8 1982	May 9 1981	MEDIAN 1977-1981	May 8 1982	May 9 1981	MEDIAN 1977-1981
Aseptic meningitis	82	91	56	1,334	1,173	848
Brucellosis	4	7	3	41	44	52
Encephalitis: Primary (arthropod-borne & unspec.)	16	18	13	259	240	213
Post-infectious	2	3	3	21	32	61
Gonorrhea: Civilian	17,262	19,815	19,815	312,122	335,835	324,066
Military	344	527	551	8,899	9,891	9,260
Hepatitis: Type A	439	490	536	7,693	8,718	9,767
Type B	446	418	326	6,922	6,658	5,554
Non A, Non B	58	N	N	702	N	N
Unspecified	151	237	200	3,122	3,674	3,483
Legionellosis	5	N	N	118	N	N
Leprosy	9	2	2	66	75	55
Malaria	19	53	14	258	450	168
Measles (rubeola)	38	176	731	496	1,229	6,893
Meningococcal infections: Total	73	78	55	1,270	1,683	1,188
Civilian	73	78	55	1,266	1,678	1,176
Military	-	-	-	4	5	9
Mumps	241	96	304	2,485	1,880	6,998
Pertussis	17	20	24	376	362	368
Rubella(German measles)	196	87	697	1,088	1,033	6,185
Syphilis (Primary & Secondary): Civilian	603	528	442	11,440	10,370	8,347
Military	5	2	6	142	123	106
Tuberculosis	532	454	576	8,611	8,734	9,227
Tularemia	4	4	3	33	39	37
Typhoid fever	3	5	6	128	157	135
Typhus fever, tick-borne (RMSF)	20	32	11	61	84	41
Rabies, animal	149	166	114	2,023	2,551	1,527

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	-	Poliomyelitis: Total	1
Botulism (Calif. 1)	22	Paralytic	1
Cholera	-	Psittacosis	32
Congenital rubella syndrome	3	Rabies, human	-
Diphtheria	-	Tetanus (Ala. 2, Tex. 1)	20
Leptospirosis	20	Trichinosis(Mass. 3, N.J. 1)	42
Plague	2	Typhus fever, flea-borne (endemic, murine)	5

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 8, 1982 and May 9, 1981 (18th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	82	41	259	21	312,122	335,835	439	446	58	151	5	66
NEW ENGLAND	1	-	12	1	7,469	9,167	14	18	-	1	2	1
Maine	-	-	-	-	343	409	4	1	-	-	-	-
N.H.	-	-	-	-	212	290	1	-	-	-	1	-
Vt.	-	-	-	-	158	138	1	-	-	-	-	-
Mass.	-	-	4	-	3,346	3,392	5	7	-	1	-	-
R.I.	-	-	-	-	528	410	2	1	-	-	-	-
Conn.	1	-	8	1	2,982	3,528	1	9	-	-	1	1
MID. ATLANTIC	13	-	40	1	38,542	39,300	40	86	13	16	-	4
Upstate N.Y.	4	-	15	-	6,283	6,278	8	26	4	3	-	1
N.Y. City	2	-	8	-	16,073	16,102	19	38	-	6	-	1
N.J.	5	-	9	-	7,000	7,933	13	22	9	7	-	1
Pa.	2	-	8	1	9,186	8,987	U	U	U	U	-	1
E.N. CENTRAL	5	-	50	6	42,642	52,852	51	70	3	13	-	-
Ohio	2	-	16	4	12,700	18,469	14	13	1	1	-	-
Ind.	-	-	12	2	5,158	4,549	19	32	2	8	-	-
Ill.	-	-	-	-	9,899	14,495	2	7	-	1	-	-
Mich.	2	-	20	-	10,617	10,792	14	17	-	3	-	-
Wis.	1	-	2	-	4,268	4,567	2	1	-	-	-	-
W.N. CENTRAL	4	4	14	1	14,943	15,621	17	9	2	5	1	-
Minn.	3	-	1	1	2,285	2,494	8	1	-	-	-	-
Iowa	-	1	8	-	1,623	1,635	-	3	-	1	-	-
Mo.	1	1	3	-	6,783	7,050	5	1	-	1	-	-
N. Dak.	-	-	-	-	212	213	-	-	-	-	-	-
S. Dak.	-	-	-	-	422	446	1	-	-	-	-	-
Nebr.	-	-	1	-	953	1,230	1	3	1	3	1	-
Kans.	-	2	1	-	2,665	2,553	2	1	1	-	-	-
S. ATLANTIC	11	13	34	4	77,611	82,853	49	80	5	18	2	4
Del.	-	-	-	-	1,277	1,225	2	1	1	3	-	-
Md.	-	-	10	-	10,388	9,013	14	15	1	2	1	2
D.C.	-	-	-	-	4,266	5,320	-	3	-	-	-	-
Va.	-	4	9	-	7,010	7,590	6	4	-	-	-	-
W. Va.	-	-	-	-	942	1,257	3	-	-	-	-	-
N.C.	2	-	3	1	13,264	12,814	5	9	-	1	-	-
S.C.	-	2	-	-	7,970	7,972	8	6	-	2	-	-
Ga.	-	1	-	-	9,483	16,465	3	29	1	3	-	-
Fla.	9	6	12	3	23,011	21,197	8	13	2	7	1	2
E.S. CENTRAL	10	5	14	1	26,600	27,786	20	40	6	6	-	-
Ky.	2	-	-	-	3,608	3,588	4	7	-	5	-	-
Tenn.	2	3	9	-	10,045	10,158	14	21	3	-	-	-
Ala.	6	1	4	1	8,147	8,908	1	10	3	1	-	-
Miss.	-	1	1	-	4,800	5,132	1	2	-	-	-	-
W.S. CENTRAL	9	10	28	-	43,845	44,886	97	23	3	60	-	8
Ark.	-	3	1	-	3,694	3,079	4	2	1	4	-	-
La.	3	2	4	-	7,830	7,116	12	8	-	10	-	-
Okla.	2	3	9	-	4,826	4,602	27	5	2	9	-	-
Tex.	4	2	14	-	27,495	30,089	54	8	-	37	-	8
MOUNTAIN	1	-	14	1	11,426	13,285	41	13	3	4	-	1
Mont.	-	-	-	-	476	492	-	1	-	-	-	-
Idaho	-	-	-	-	533	534	2	1	-	-	-	1
Wyo.	-	-	-	-	309	293	6	2	-	-	-	-
Colo.	-	-	4	1	3,027	3,504	12	2	2	1	-	-
N. Mex.	-	-	-	-	1,408	1,450	10	-	-	-	-	-
Ariz.	1	-	6	-	3,151	4,182	2	4	-	-	-	-
Utah	-	-	-	-	523	622	2	1	1	3	-	-
Nev.	-	-	4	-	1,999	2,208	7	2	-	-	-	-
PACIFIC	28	9	53	2	49,044	51,085	110	107	23	28	-	48
Wash.	1	-	5	-	4,060	4,411	7	5	-	2	-	4
Oreg.	-	-	1	-	2,721	3,498	11	4	-	1	-	-
Calif.	17	8	43	2	40,202	40,813	90	98	23	25	-	25
Alaska	-	1	3	-	1,217	1,333	-	-	-	-	-	1
Hawaii	10	-	1	-	844	1,030	2	-	-	-	-	18
Guam	U	-	-	-	19	49	U	U	U	U	U	-
P.R.	-	-	1	-	1,027	1,116	5	1	-	6	-	-
V.I.	U	-	-	-	60	45	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	146	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 8, 1982 and May 9, 1981 (18th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	19	258	38	496	1,229	73	1,270	241	2,685	17	196	1,088	1,033
NEW ENGLAND	1	19	-	7	39	8	71	3	132	2	2	10	79
Maine	-	-	-	-	3	-	2	2	27	-	-	-	31
N.H.	-	1	-	1	5	-	10	-	12	-	-	8	31
Vt.	-	-	-	2	2	-	4	-	4	-	-	-	-
Mass.	-	13	-	2	23	4	20	1	69	1	1	1	11
R.I.	-	1	-	-	-	-	9	-	10	1	1	1	-
Conn.	1	4	-	2	6	4	26	-	10	-	-	-	6
MID. ATLANTIC	4	29	1	33	383	15	208	10	175	3	6	64	125
Upstate N.Y.	2	6	-	15	174	2	52	2	35	3	1	31	52
N.Y. City	1	11	1	16	29	3	41	3	31	-	4	20	30
N.J.	1	8	-	-	37	1	47	3	30	-	1	13	39
Pa.	-	4	-	7	143	9	68	2	79	-	-	-	4
E.N. CENTRAL	-	17	-	31	59	6	153	150	1,583	3	5	99	233
Ohio	-	5	-	-	15	6	63	125	1,173	-	-	-	-
Ind.	-	1	-	1	3	-	13	-	25	1	2	18	76
Ill.	-	1	-	15	15	-	35	10	100	2	3	26	58
Mich.	-	9	-	15	25	-	31	15	214	-	-	38	29
Wis.	-	1	-	-	1	-	11	-	71	-	-	17	70
W.N. CENTRAL	-	7	-	2	4	3	51	39	194	2	2	26	55
Minn.	-	-	-	-	1	3	12	34	112	1	2	5	7
Iowa	-	3	-	-	1	-	5	2	23	-	-	-	-
Mo.	-	1	-	2	-	-	17	-	13	-	-	15	2
N. Dak.	-	-	-	-	-	-	4	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	1	-	-	1	-
Nebr.	-	2	-	-	1	-	4	-	-	-	-	-	1
Kans.	-	1	-	-	1	-	8	3	45	1	-	5	45
S. ATLANTIC	4	44	2	29	263	13	259	7	162	2	4	33	89
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	-	6	-	2	1	3	14	1	13	-	3	14	1
D.C.	-	3	-	1	1	-	1	-	-	-	-	-	-
Va.	-	16	-	14	3	-	26	1	23	-	-	10	3
W. Va.	1	1	-	1	7	-	7	1	72	-	-	1	16
N.C.	-	-	-	-	3	4	42	1	6	1	-	-	4
S.C.	1	3	-	-	-	1	32	-	9	-	-	1	6
Ga.	2	6	-	-	84	1	63	2	6	1	1	2	21
Fla.	-	9	2	11	164	4	74	1	30	-	-	5	38
E.S. CENTRAL	-	1	-	5	-	7	84	-	25	1	3	34	19
Ky.	-	1	-	1	-	2	13	-	9	1	3	19	12
Tenn.	-	-	-	4	-	2	33	-	9	-	-	-	7
Ala.	-	-	-	-	-	3	34	-	4	-	-	-	-
Miss.	-	-	-	-	-	-	4	-	3	-	-	15	-
W.S. CENTRAL	6	19	4	15	280	4	159	13	104	-	3	62	67
Ark.	-	1	-	-	-	-	8	-	5	-	-	-	-
La.	1	3	-	-	-	1	25	-	3	-	-	-	9
Okla.	2	2	-	-	5	2	12	-	-	-	-	2	-
Tex.	3	13	4	15	275	1	114	13	96	-	3	60	58
MOUNTAIN	-	6	-	-	19	3	76	2	40	2	5	31	53
Mont.	-	-	-	-	-	-	4	-	3	-	-	3	1
Idaho	-	-	-	-	-	-	5	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	-	5	1
Colo.	-	4	-	-	5	2	29	-	7	2	1	2	27
N. Mex.	-	1	-	-	3	1	11	-	-	-	-	2	3
Ariz.	-	1	-	-	2	-	14	1	14	-	2	7	11
Utah	-	-	-	-	-	-	6	1	10	-	2	10	3
Nev.	-	-	-	-	9	-	3	-	2	-	-	2	5
PACIFIC	4	116	31	374	182	14	209	17	270	2	166	729	313
Wash.	-	6	1	16	1	1	23	3	43	-	-	19	45
Oreg.	-	3	-	-	1	7	45	-	-	-	-	3	35
Calif.	4	105	30	356	178	4	129	14	219	2	166	699	229
Alaska	-	-	-	-	-	2	9	-	6	-	-	1	-
Hawaii	-	2	-	2	2	-	3	-	2	-	-	7	4
Guam	U	2	U	1	5	U	-	U	1	U	U	1	-
P.R.	-	4	8	59	143	-	3	1	26	-	-	4	3
V.I.	U	-	U	-	6	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 8, 1982 and May 9, 1981 (18th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick borne) (RMSF)		RABIES Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	11,440	10,370	532	8,611	33	3	128	20	61	2,023
NEW ENGLAND	215	230	6	231	-	-	11	-	-	5
Maine	1	1	-	17	-	-	-	-	-	5
N.H.	-	9	-	9	-	-	-	-	-	-
Vt.	-	13	-	6	-	-	2	-	-	-
Mass.	150	140	6	161	-	-	8	-	-	-
R.I.	12	16	-	8	-	-	-	-	-	-
Conn.	52	51	-	30	-	-	1	-	-	-
MID. ATLANTIC	1,542	1,598	77	1,436	2	1	16	-	-	40
Upstate N.Y.	151	145	15	257	2	-	2	-	-	20
N.Y. City	944	991	29	552	-	-	11	-	-	-
N.J.	182	197	14	272	-	1	3	-	-	1
Pa.	265	265	19	355	-	-	-	-	-	19
E.N. CENTRAL	644	734	69	1,339	-	-	13	-	-	237
Ohio	110	90	12	240	-	-	6	-	-	33
Ind.	79	65	4	175	-	-	-	-	-	40
Ill.	297	410	50	531	-	-	3	-	-	101
Mich.	121	133	3	319	-	-	4	-	-	1
Wis.	37	36	-	74	-	-	-	-	-	62
W.N. CENTRAL	222	186	25	273	7	-	3	2	3	463
Minn.	37	69	4	47	-	-	-	-	-	76
Iowa	11	9	6	41	1	-	1	-	-	147
Mo.	136	91	9	124	5	-	1	-	1	54
N. Dak.	4	3	1	6	-	-	-	-	-	46
S. Dak.	-	2	1	7	-	-	-	-	-	34
Nebr.	8	3	3	12	-	-	-	-	-	50
Kans.	26	9	1	36	1	-	1	2	2	56
S. ATLANTIC	3,116	2,725	99	1,694	6	1	18	7	24	322
Del.	7	7	-	18	-	-	-	-	-	-
Md.	180	215	11	207	1	1	6	-	7	16
D.C.	201	241	4	63	-	-	-	-	-	-
Va.	217	265	6	188	1	-	2	-	-	155
W. Va.	8	7	6	46	-	-	2	-	-	16
N.C.	225	205	25	277	-	-	-	4	9	12
S.C.	147	191	9	164	3	-	2	3	7	21
Ga.	662	688	-	234	-	-	-	-	1	79
Fla.	1,469	906	38	497	1	-	6	-	-	23
E.S. CENTRAL	826	681	50	783	4	1	11	1	6	246
Ky.	41	29	15	222	-	-	-	-	-	42
Tenn.	224	273	9	260	4	-	2	1	2	170
Ala.	292	180	19	225	-	-	7	-	3	34
Miss.	269	199	7	76	-	1	2	-	1	-
W.S. CENTRAL	2,886	2,474	89	950	8	-	8	9	26	416
Ark.	80	48	3	91	5	-	1	1	3	58
La.	631	553	32	178	1	-	-	-	-	11
Okla.	63	66	10	139	2	-	2	8	15	90
Tex.	2,112	1,807	44	542	-	-	5	-	8	257
MOUNTAIN	288	251	12	256	3	-	5	1	1	47
Mont.	1	8	-	18	-	-	-	-	-	21
Idaho	16	2	1	11	1	-	-	1	1	-
Wyo.	9	3	-	2	1	-	-	-	-	2
Colo.	85	79	-	31	-	-	1	-	-	-
N. Mex.	61	53	3	47	-	-	-	-	-	5
Ariz.	64	51	5	105	-	-	3	-	-	19
Utah	10	7	1	14	1	-	1	-	-	-
Nev.	42	48	2	28	-	-	-	-	-	-
PACIFIC	1,701	1,491	105	1,649	3	-	43	-	1	247
Wash.	53	58	7	96	1	-	2	-	-	-
Oreg.	49	33	4	61	-	-	1	-	-	-
Calif.	1,551	1,365	82	1,358	2	-	39	-	1	180
Alaska	6	4	-	18	-	-	-	-	-	67
Hawaii	42	31	12	116	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	204	255	1	107	-	-	1	-	-	17
V.I.	-	4	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending
May 8, 1982 (18th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	650	425	168	31	13	13	52
Boston, Mass.	193	117	53	12	4	7	24
Bridgeport, Conn.	37	26	9	1	1	-	1
Cambridge, Mass.	22	16	5	1	-	-	5
Fall River, Mass.	32	20	9	1	1	1	1
Hartford, Conn.	56	34	16	5	1	-	1
Lowell, Mass.	35	24	9	1	-	1	3
Lynn, Mass.	15	9	4	2	-	-	-
New Bedford, Mass.	28	21	7	-	-	-	1
New Haven, Conn.	42	30	9	2	1	-	1
Providence, R.I.	55	42	10	2	1	-	6
Somerville, Mass.	8	5	3	-	-	-	2
Springfield, Mass.	41	24	12	1	1	3	5
Waterbury, Conn.	36	23	9	2	2	-	2
Worcester, Mass.	50	34	13	1	1	1	-
MID. ATLANTIC	2,823	1,829	645	180	75	94	111
Albany, N.Y.	53	27	12	5	2	7	-
Allentown, Pa.	13	11	2	-	-	-	2
Buffalo, N.Y.	150	97	41	8	2	2	9
Camden, N.J.	34	23	9	-	2	-	-
Elizabeth, N.J.	30	26	4	-	-	-	-
Erie, Pa.†	50	39	6	2	3	-	3
Jersey City, N.J.	48	33	10	2	2	1	1
N.Y. City, N.Y.	1,444	928	343	107	37	29	46
Newark, N.J.	66	29	20	9	6	2	5
Paterson, N.J.	34	21	5	1	1	6	5
Philadelphia, Pa.†	442	269	108	31	3	31	12
Pittsburgh, Pa.†	67	46	13	1	3	4	3
Reading, Pa.	45	40	3	-	2	-	6
Rochester, N.Y.	119	83	17	7	5	7	10
Schenectady, N.Y.	28	21	6	-	1	-	-
Scranton, Pa.†	25	14	7	1	3	-	-
Syracuse, N.Y.	84	56	20	3	1	4	1
Trenton, N.J.	41	29	10	1	1	-	-
Utica, N.Y.	28	20	5	2	1	-	4
Yonkers, N.Y.	22	17	4	-	-	1	4
E.N. CENTRAL	2,240	1,404	533	146	66	91	67
Akron, Ohio	62	47	11	1	1	2	-
Canton, Ohio	54	31	20	3	-	-	2
Chicago, Ill.	482	290	111	39	15	27	8
Cincinnati, Ohio	184	120	42	10	4	8	12
Cleveland, Ohio	161	88	41	15	6	11	5
Columbus, Ohio	92	60	17	4	5	6	5
Dayton, Ohio	107	64	29	5	4	5	2
Detroit, Mich.	278	162	65	29	10	12	4
Evansville, Ind.	50	29	15	2	4	-	1
Fort Wayne, Ind.	49	29	12	3	3	2	2
Gary, Ind.	16	5	6	2	3	-	1
Grand Rapids, Mich.	51	37	7	4	-	3	3
Indianapolis, Ind.	169	104	43	11	3	8	2
Madison, Wis.	53	34	13	3	2	1	8
Milwaukee, Wis.	125	93	24	4	3	1	-
Peoria, Ill.	41	26	11	1	-	3	4
Rockford, Ill.	36	22	12	2	-	-	3
South Bend, Ind.	56	39	14	-	2	1	3
Toledo, Ohio	88	66	19	2	1	-	2
Youngstown, Ohio	86	58	21	6	-	1	-
W.N. CENTRAL	762	526	160	30	21	25	26
Des Moines, Iowa	76	52	14	3	5	2	3
Duluth, Minn.	26	19	4	2	-	1	2
Kansas City, Kans.	37	23	6	7	1	-	2
Kansas City, Mo.	109	73	24	5	2	5	8
Lincoln, Nebr.	38	31	7	-	-	-	-
Minneapolis, Minn.	91	66	20	-	2	3	2
Omaha, Nebr.	76	53	15	4	2	2	1
St. Louis, Mo.	168	108	44	5	5	4	2
St. Paul, Minn.	67	49	8	2	2	6	2
Wichita, Kans.	74	52	16	2	2	2	4
S. ATLANTIC	1,164	691	303	98	32	35	48
Atlanta, Ga.	125	82	27	9	5	2	3
Baltimore, Md.	219	130	58	21	3	7	6
Charlotte, N.C.	66	37	17	5	2	3	4
Jacksonville, Fla.	88	47	30	3	5	3	2
Miami, Fla.	110	57	31	11	2	9	3
Norfolk, Va.	63	40	14	3	2	4	3
Richmond, Va.	84	48	26	8	-	2	6
Savannah, Ga.	57	31	19	5	2	-	5
St. Petersburg, Fla.	84	69	11	3	1	-	4
Tampa, Fla.	56	36	11	4	2	2	3
Washington, D.C.	150	77	44	19	5	3	4
Wilmington, Del.	62	37	15	7	3	-	5
E.S. CENTRAL	705	421	189	45	23	26	34
Birmingham, Ala.	106	68	27	6	5	-	2
Chattanooga, Tenn.	46	27	9	4	1	4	8
Knoxville, Tenn.	61	40	15	3	2	1	-
Louisville, Ky.	125	78	36	8	1	2	11
Memphis, Tenn.	178	101	47	10	10	10	6
Mobile, Ala.	25	14	7	3	-	1	1
Montgomery, Ala.	58	33	14	5	-	6	-
Nashville, Tenn.	106	60	34	6	4	2	6
W.S. CENTRAL	1,538	868	372	163	59	76	39
Austin, Tex.	66	44	15	2	3	2	2
Baton Rouge, La.	57	34	13	7	1	2	2
Corpus Christi, Tex.	39	23	7	5	2	2	1
Dallas, Tex.	190	111	52	14	7	6	4
El Paso, Tex.	48	29	12	2	2	3	2
Fort Worth, Tex.	96	56	24	12	4	-	3
Houston, Tex.	410	215	102	53	20	20	6
Little Rock, Ark.	60	43	13	2	1	1	3
New Orleans, La.	205	99	40	44	3	19	-
San Antonio, Tex.	184	106	51	10	8	9	11
Shreveport, La.	83	46	25	4	4	4	1
Tulsa, Okla.	100	62	18	8	4	8	4
MOUNTAIN	671	404	140	66	38	22	17
Albuquerque, N.Mex.	109	46	22	23	16	1	2
Colo. Springs, Colo.	31	24	3	-	4	-	5
Denver, Colo.	117	73	26	12	4	2	1
Las Vegas, Nev.	65	29	20	10	3	3	1
Ogden, Utah	23	17	5	-	-	1	-
Phoenix, Ariz.	166	110	29	12	7	8	2
Pueblo, Colo.	18	15	2	-	1	-	1
Salt Lake City, Utah	51	28	14	3	1	5	2
Tucson, Ariz.	91	62	19	6	2	2	3
PACIFIC	1,561	1,014	353	104	31	58	82
Berkeley, Calif.	20	16	3	1	-	-	-
Fresno, Calif.	57	40	10	4	1	2	3
Glendale, Calif.	17	13	2	2	-	-	1
Honolulu, Hawaii	47	28	15	1	1	2	1
Long Beach, Calif.	100	73	20	2	-	5	5
Los Angeles, Calif.	404	252	84	41	12	14	19
Oakland, Calif.	68	44	14	6	-	4	1
Pasadena, Calif.	26	13	10	2	1	-	3
Portland, Oreg.	109	65	29	6	2	7	5
Sacramento, Calif.	75	43	19	6	2	5	5
San Diego, Calif.	115	80	27	3	4	1	11
San Francisco, Calif.	148	84	46	14	-	4	6
San Jose, Calif.	148	104	32	8	4	-	14
Seattle, Wash.	137	96	25	6	1	9	3
Spokane, Wash.	64	46	11	1	3	3	4
Tacoma, Wash.	26	17	6	1	-	2	1
TOTAL	12,114††	7,582	2,863	863	358	440	476

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

Injuries – Continued

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality December 1981		Estimated number of physician contacts December 1981[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	168,820	863.1	84,586,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	8,230	42.1	4,610,000
Malignant neoplasms (140-208)	1,804,120	34,270	175.2	1,403,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	65,960	337.2	4,956,000
Suicides, homicides (E950-E978)	1,401,880	4,110	21.0	–
Chronic liver disease and cirrhosis (571)	301,070	2,250	11.5	86,000
Cerebrovascular diseases (430-438)	280,430	14,530	74.3	557,000
Pneumonia and influenza (480-487)	124,830	4,170	21.3	1,067,000
Diabetes mellitus (250)	117,340	3,090	15.8	2,312,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	4,930	25.2	2,025,000
Prenatal care[5]				1,911,000
Infant mortality[5]		3,600	11.6 /1000 live births	

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[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the midpoint of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 1, April 16, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 30, No. 12, March 18, 1982, p 1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 1, April 16, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, December, 1981, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 30, No. 12, March 18, 1982, p 1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Injuries – Continued

Motor-vehicle deaths account for nearly 35% of all injury-related deaths; homicides and suicides account for over 30%; and burns, falls, and drownings account for nearly 18% (*2*).

The societal cost of injuries is high—estimated at more than $83 billion per year (*2*); yet relatively little effort has been devoted to the prevention of injuries. This imbalance is, in part, the result of a widespread misunderstanding of injury causation. Often, cause is characterized by the term "accident," which connotes chance or fate, while actually many injuries, like diseases, can be prevented. Also, epidemiologic analyses of injuries describing the relationship of host, agent, and environmental variables may provide useful information about injury prevention. However, education-oriented intervention strategies directed at host variables such as risk-taking behavior and alcohol and drug use typically have had little effect on injury rates. Automatic or "passive" protection is gaining recognition as the major focus of prevention efforts because it requires no individual action by those protected and has considerable potential for preventing injury morbidity and mortality. Ten interrelated strategies that can help prevent injuries have recently been summarized (*3,4*) (Table 3).

Listed below are 3 injury-control measures designed to eliminate or modify potentially injurious environmental factors that have been associated with substantial decreases in morbidity and mortality.

1. Since the introduction in 1972 of childproof caps on aspirin and other medication containers, there has been a substantial reduction in childhood poisonings. In the period 1971-1977, deaths attributable to ingestion of analgesics and antipyretics decreased 41% for all age groups (*5*).

TABLE 3. Basic strategies to reduce injuries and deaths*

Strategies	Examples
1) Prevent the marshalling of potentially injurious agents†	Reduce speed limits, the height of diving boards, and the height of high chairs
or	
2) Reduce the amount of the agent	
3) Prevent inappropriate release of the agent	Apply nonslip surfaces to bathtubs
4) Modify release of the agent	Use seatbelts to decelerate occupants; use flame-retardant fabrics
5) Separate host from potentially injurious agent by time or space	Lock up guns and harmful substances
or	
6) Separate them with physical barriers	
7) Modify surfaces and basic structures	Use passive restraint systems; use pots and pans with non-heat-conducting handles
8) Increase resistance to injury	Participate in a physical-conditioning program
9) Improve emergency responses	Apply first aid rapidly
10) Improve medical care and rehabilitation	Train emergency and paramedical personnel

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*Source: Baker SP, Dietz PE. Injury prevention. In: Healthy people. The Surgeon's General's Report on Health Promotion and Disease Prevention, background papers. Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1979; Haddon W, Jr, Baker SP. Injury control. In: Clark DW, MacMahon B, eds. Preventive and community medicine. Boston: Little, Brown, 1981.

†The agent of injury is defined here as the abnormal transfer of energy.

Injuries — Continued

2. In New York City, there was a substantial reduction in the incidence of childhood injuries and deaths due to falls after the health department provided free, easily installed window guards to families with young children living in high-risk areas. Between 1973, when the program began, and 1975, the number of falls reported declined 50%, and the number of deaths due to falls decreased 35% (*6*).

3. In Honolulu, where legislation requires protective fencing around public and private pools, childhood drowning fatalities associated with swimming pools occur substantially less frequently than in cities without such legislation. Total population studies of swimming pool fatalities have been done in Honolulu and in Brisbane, Australia, a city that does not have a law requiring fencing but is similar to Honolulu in size, pool-to-house ratio, climate, and life style (*7*). The fatality rate for swimming-pool drownings in Honolulu is 0.9/100,000 population, compared with a rate of 2.6/100,000 in Brisbane, Australia.

Two other areas in which control measures are likely to decrease injuries include tap-water scalds and childhood automobile injuries. Each year 4,000 persons require extended hospital care for tap-water scalds. Although it is still too early to measure the outcome, many cities are actively involved in programs to prevent these injuries. Tap-water-scald injuries can be virtually eliminated by limiting water-heater temperature to no more than 120 F (48.9 C) (*8*).

Recognizing that automobile child-restraint devices, when properly used, can be up to 90% effective in reducing fatalities and serious injuries, 10 states have passed child-restraint laws. At least 20 more states have such bills pending.

These examples of injury-control methods have several common elements (*5*). 1) The injury pattern is fairly obvious and consistent so that it can be defined through data-collection methods currently available. 2) The countermeasure consists of modifying the environment to eliminate the hazard or reduce it demonstrably. 3) The need for behavior change on the part of the potential victim is minimal. 4) The countermeasure and its cost are accepted by the public or are sufficiently minor to be of little significance. 5) The cost and ease of introducing the countermeasure is acceptable to manufacturers or others responsible for it. 6) The injury-producing product or environment is susceptible to relatively rapid modification or replacement.

Reported by Environmental Health Svcs Div, Center for Environmental Health, CDC.

Editorial Note: A 1981 survey of state and territorial health departments conducted by the National Environmental Health Association identifed only 12 state health departments that maintain injury-control programs. Expansion of the field of injury control requires the involvement of voluntary and private organizations, as well as federal, state, and local governments, and the commitment of health professionals--physicians, nurses, epidemiologists, and public health officials—all of whom can be leaders in advocating and implementing injury-control programs.

The Morbidity and Mortality Weekly Report, circulation 106,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Injuries — Continued

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MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

JUN 14 1982

Persistent, Generalized Lymphadenopathy among Homosexual Males

U. S. GOVT. PUBS.
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Since October 1981, cases of persistent, generalized lymphadenopathy—not attributable to previously identified causes—among homosexual males have been reported to CDC by physicians in several major metropolitan areas in the United States. These reports were prompted by an awareness generated by ongoing CDC and state investigations of other emerging health problems among homosexual males (*1*).

In February and March 1982, records were reviewed for 57 homosexual men with lymphadenopathy seen at medical centers in Atlanta, New York City, and San Francisco. The cases reviewed met the following criteria: 1) lymphadenopathy of at least 3 months' duration, involving 2 or more extra-inguinal sites, and confirmed on physical examination by the patient's physician; 2) absence of any current illness or drug use known to cause lymphadenopathy; and 3) presence of reactive hyperplasia in a lymph node, if a biopsy was performed.

The 57 patients had a mean age of 33 years and the following characteristics: all were male; 81% were white, 15% black, and 4% Hispanic; 83% were single, 6% married, and 11% divorced; 86% were homosexual, 14% bisexual. The median duration of lymphadenopathy was 11 months. Ninety-five percent of patients had at least 3 node chains involved (usually cervical, axillary, and inguinal). Forty-three patients had had lymph node biopsies showing reactive hyperplasia. Approximately 70% of the patients had some constitutional symptoms including fatigue, 70%; fever, 49%; night sweats, 44%; and weight loss of ≥5 pounds, 28%. Hepatomegaly and/or splenomegaly was noted among 26% of patients.

Recorded medical histories for the 57 patients suggested that the use of drugs such as nitrite inhalants, marijuana, hallucinogens, and cocaine was common. Many of these patients have a history of sexually transmitted infections (gonorrhea 58%, syphilis 47%, and amebiasis 42%). Of 30 patients skin-tested for delayed hypersensitivity response, 8 were found to be anergic on the basis of at least 2 antigens other than purified protein derivative (PPD).

Immunologic evaluation performed at CDC for 8 of the above patients demonstrated abnormal T-lymphocyte helper-to-suppressor ratios (<0.9) for 2 patients. Since this review, immunologic evaluations at CDC of 13 additional homosexual males with lymphadenopathy from Atlanta and San Francisco revealed 6 with ratios of <0.9. The normal range of T-lymphocyte helper-to-suppressor ratios established in the CDC laboratory for healthy heterosexual patients is 0.9-3.5 (mean of 2.3). The normal range is being established for apparently healthy homosexual males.

Since the initiation of this study, 1 patient with lymphadenopathy has developed Kaposi's sarcoma.

Reported by D Mildvan, MD, U Mathur, MD, Div of Infectious Diseases, Beth Israel Medical Center, R Enlow, MD, Rheumatology Dept, Hospital for Joint Diseases, D Armstrong, MD, J Gold, MD, C Sears, MD, B Wong, MD, AE Brown, MD, S Henry, MD, Div of Infectious Disease, B Safai, MD, Dermatology Svc, Dept of Medicine, Z Arlin, MD, Div of Hematology, Memorial Sloan-Kettering Medical Center, A Moore, MD, C

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Lymphadenopathy – Continued

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Editorial Note: The report above documents the occurrence of cases of unexplained, persistent, generalized lymphadenopathy among homosexual males. There are many known causes of generalized lymphadenopathy including viral infections (e.g., hepatitis B, infectious mononucleosis, cytomegalovirus infection, rubella), tuberculosis, disseminated *Mycobacterium avium-intracellulare*, syphilis, other bacterial and fungal infections, toxoplasmosis, connective tissue disorders, hypersensitivity drug reactions, heroin use, and neoplastic diseases (including leukemia and lymphoma) (*2*). Causes for the persistent lymphadenopathy among patients discussed above were sought but could not be identified.

This unexplained syndrome is of concern because of current reports of Kaposi's sarcoma (KS) and opportunistic infections (OI) that primarily involve homosexual males (*1,3*). Epidemiologic characteristics (age, racial composition, city of residence) of the homosexual patients with lymphadenopathy discussed here are similar to those of the homosexual KS/OI patients. Thirty-two (44%) of 73 Kaposi's sarcoma patients and 14 (23%) of 61 *Pneumocystis carinii* pneumonia patients reported to CDC in the period mid-June 1981-January 1982 had a history of lymphadenopathy before diagnosis (*3*). *Mycobacterium avium-intracellulare* (an opportunistic agent) has been isolated from the lymph nodes of a homosexual patient (*4*). Moreover, the findings of anergy and depressed T-lymphocyte helper-to-suppressor ratios in some of the patients with lymphadenopathy suggest cellular immune dysfunction. Patients with KS/OI have had severe abnormalities of cellular immunity (*5,6*). The relationship between immunologic findings for patients with lymphadenopathy and patients with KS/OI remains to be determined.

Although these cases have been identified and defined on the basis of the presence of lymphadenopathy, this finding may be merely a manifestation of an underlying immunologic or other disorder that needs to be characterized further. Virologic and immunologic studies of many of these patients are currently under way. An analysis of trends in incidence for lymphadenopathy over the past several years is being conducted to determine whether this syndrome is new and whether homosexual males are particularly affected. Results of these studies and follow-up of these patients are necessary before the clinical and epidemiologic significance of persistent, generalized lymphadenopathy among homosexual males can be determined. Homosexual male patients with unexplained, persistent, generalized lymphadenopathy should be followed for periodic review.

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Lymphadenopathy – Continued

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Epistaxis and Liver-Function Abnormalities Associated with Exposure to "Butyl" Caulk — Kentucky

In a recent study the National Institute for Occupational Safety and Health (NIOSH) was asked to investigate a report of possible toluene overexposure involving a person who lived in a log home in Brodhead, Kentucky.

On February 27, 1981, a 45-year-old male resident of Brodhead was hospitalized for uncontrolled epistaxis. Three days earlier, while the walls on the first floor of his log home were being caulked with a toluene- and petroleum distillate-based "butyl" caulk, he had noted a "strong solvent odor." However, he remained in the house almost continuously. Over the next 3 days, he experienced increasingly severe headache, nausea, dizziness, and feelings of disorientation. On the fourth morning he had a nosebleed that became profuse in early evening, requiring that he be hospitalized. His wife and 2 sons, who slept upstairs, had similar symptoms, including nosebleeds, but to a milder degree. Neither he nor his family had a history of nosebleeds or bleeding diathesis. Results of blood tests done during his hospitalization to determine coagulation parameters were consistently normal.

In the first 5 days of his hospitalization, the patient continued to have intermittent nasal hemorrhage despite packing. He received 8 units of blood in the same period and underwent surgery on March 4. On March 6, a routine blood chemistry screen showed elevations of total bilirubin, alkaline phosphatase, gamma glutamyl-transferase, serum glutamic oxalacetic transaminase, and lactate dehydrogenase. His liver function returned to normal within 2 weeks, except for a persistently elevated alkaline phosphatase. Although he did not and does not consume alcohol, he has since developed moderate hepatomegaly. A liver biopsy done on February 1, 1982, showed fatty infiltration and fibrosis. There was no history of hepatitis or exposure to hepatitis; however, laboratory tests to rule out viral hepatitis were not done.

Evaluation of the log home included air sampling and caulk analysis by a private environmental consulting firm on April 5, 1981, and a visit by NIOSH investigators on April 20 (*1*). Air sampling on April 5 showed toluene at a concentration of 2 parts per million (ppm) in the patient's bedroom (acceptable NIOSH limit is 100 ppm). NIOSH investigators noted that the house was heated to about 75 F (24 C) without humidification. The patient's bedroom had bare log walls with caulk visibly extruding between the logs. NIOSH calculated the surface area of exposed caulk in the bedroom to be 4.4 square feet. Quantitative analysis of a bulk sample of fresh caulk yielded 6% toluene, 0.5% xylene, and 15.5% "naphtha" or mixed petroleum distillates.

Reported by the Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: Symptoms compatible with central nervous system (CNS) involvement have been reported following occupational exposure to toluene, xylene, and naphtha (*2*). Airborne xylene in high concentrations is particularly irritating to mucous membranes (*3*). Although toxic hepatitis has been reported only rarely in association with toluene and xylene exposures (*4,5*), persistently elevated alkaline phosphatase was reported for a glue "sniffer" who was

Epistaxis – Continued

heavily exposed to toluene (*4*), and hepatomegaly was reported for a substantial proportion of industrial painters who were chronically exposed to toluene (*6*). In a recent Swedish study (*7*), industrial painters who were chronically exposed to levels of toluene and mixed solvents that were below Sweden's standard threshold limit had significantly higher alkaline phosphatase levels than did a reference group.

Although environmental monitoring was not done in the log home until several weeks after the patient was initially hospitalized, it appears likely that he was exposed to air levels of toluene, naphtha, and xylene sufficient to cause symptoms compatible with CNS involvement and to precipitate—in combination with the dry, warm, indoor air—a severe nosebleed. Mucous-membrane irritation resulting from chemical exposure associated with nosebleeds is not uncommon. Although the association between such an exposure and liver-function abnormalities and persistent hepatomegaly is less clear, the sudden rise and fall in liver enzymes within 2 weeks after exposure to the caulk, and the absence of any other explanation for the liver function abnormalities, make the possibility of toxic hepatitis plausible. Results of tests on material obtained in a liver biopsy a year after the exposure are compatible with this hypothesis.

Contact with the trade organization of log-home manufacturers and 17 of its member companies indicated that, because of variations in the building design, there is no established policy regarding variations in the techniques or the types of caulking used. Member companies stated that the first caulking is usually done at the time of construction and that the structure is recaulked again later. Neither the caulk manufacturer nor the trade organization recalled previous reports of illness associated with exposure to caulk vapors.

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Human Cryptosporidiosis — Alabama

A case of human cryptosporidiosis in an animal handler has been reported by Auburn University. About 3 weeks before onset of symptoms in mid-July 1981, the patient, a previously healthy 25-year-old male free of immune deficiencies, had started a survey of calves for *Cryptosporidium* sp. (*1*). Clinical features of his illness included nausea and low-grade fever, moderate abdominal cramps, anorexia, 5-10 watery, frothy bowel movements a day, and then constipation. Fourteen days after onset, the patient was much improved and was eating a full diet. Sheather's sugar-flotation tests showed oocysts of *Cryptosporidium* sp. in the first fecal sample collected 56 hours after onset of symptoms and in fecal samples collected daily

Cryptosporidiosis – Continued

through the 12th day of illness; no oocysts were found after day 12. Additional details of this case and the methods for diagnosis of human cryptosporidiosis have been published (*1*).

Since the initial report was submitted in September 1981, stool examinations have been done for 16 other animal handlers at the university who had contact with animals involved in 3 separate, unrelated outbreaks of calf cryptosporidiosis. From these 16 persons, 11 additional cases of human cryptosporidiosis were identified. All involved previously healthy individuals; no abnormalities were noted in their levels of serum globulins at the time of infection, and no deficiencies in cell-mediated immune response were detected by lymphocyte-blastogenesis testing. Symptoms occurred within 1-2 weeks after the individuals had first contact with the infected calves. Four of these 11 patients had clinical symptoms similar to those described above; 4 had diarrhea and moderate abdominal cramps; 1 had fever, constipation, and abdominal cramps; and 2 were asymptomatic. All diagnoses were based on the presence of *Cryptosporidium* sp. oocysts in stool specimens. *Cryptosporidium* sp. oocysts had been found in calf feces but were not found in the stools of any other animals (cats, dogs, goats, pigs, or rats) with which the patients had had contact.

Oocysts of *Cryptosporidium* sp. isolated from the animal handlers were found to be morphologically indistinguishable from those obtained from naturally and experimentally infected calves. When *Cryptosporidium* sp. oocysts isolated from humans and calves were inoculated orally into mice and rats, the infections produced by oocysts from the animal handlers were indistinguishable from those produced by calf oocysts. Oocysts from the animal handlers also produced cryptosporidiosis in calves that had previously been free of *Cryptosporidium*.

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Editorial Note: Before this report from Alabama, no more than approximately a dozen cases of human cryptosporidiosis had been reported in the literature. Of these, 6 involved patients who had prolonged illness and were shown to be immunologically deficient (*2-7*), 2 other patients were undergoing immunosuppressive chemotherapy (*8-9*), and 4 were otherwise apparently healthy (*1,10-12*). Eight of these 12 cases (*2-9*) were diagnosed only after histologic examination of small- or large-bowel biopsy material. The human cases at Auburn were diagnosed and monitored by the demonstration of *Cryptosporidium* oocysts in fecal flotations (*1*), as were several of the other previously reported cases (*11-12*).

Data presented in this report suggest that cryptosporidiosis occurs among not only immunologically compromised persons but also apparently healthy individuals. This information also adds substantial support to earlier proposals that cryptosporidiosis is a zoonosis (*1,13*) and that *Cryptosporidium* is not host specific (*1,13,14*), as has been reported (*15*). In the cases discussed above, it appears that *Cryptosporidium* caused the illness of the infected individuals. Cultures of fecal samples for salmonellae were negative; however, techniques for detecting other viral or bacterial pathogens were not performed. These data also indicate that calves with diarrhea due to *Cryptosporidium* should be considered as potential sources of human infection and that proper precautions should be taken by individuals who have contact with such animals.

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TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE			19th WEEK ENDING			CUMULATIVE, FIRST 19 WEEKS		
			May 15 1982	May 16 1981	MEDIAN 1977-1981	May 15 1982	May 16 1981	MEDIAN 1977-1981
Aseptic meningitis			82	90	61	1,417	1,263	909
Brucellosis			2	5	5	43	49	56
Encephalitis:	Primary (arthropod-borne & unspec.)		15	12	11	274	248	224
	Post-infectious		3	1	5	24	33	67
Gonorrhea:	Civilian		16,823	18,446	18,446	328,945	354,281	344,307
	Military		739	687	616	9,638	10,578	9,883
Hepatitis:	Type A		417	480	581	8,108	9,206	10,348
	Type B		371	416	339	7,292	7,065	5,858
	Non A, Non B		46	N	N	746	N	N
	Unspecified		151	218	171	3,272	3,982	3,654
Legionellosis			4	N	N	122	N	N
Leprosy			3	3	3	69	78	58
Malaria			15	29	12	274	480	177
Measles (rubeola)			68	161	810	560	1,390	7,703
Meningococcal infections:		Total	62	69	60	1,332	1,752	1,229
		Civilian	62	69	60	1,328	1,747	1,217
		Military	–	–	–	4	5	10
Mumps			119	92	457	2,803	1,972	7,455
Pertussis			10	15	20	385	377	389
Rubella(German measles)			78	86	617	1,165	1,121	6,802
Syphilis (Primary & Secondary):		Civilian	495	553	457	11,935	10,923	8,804
		Military	7	8	8	149	131	112
Tuberculosis			487	616	597	9,094	9,350	9,721
Tularemia			4	7	3	37	46	40
Typhoid fever			4	8	8	131	165	138
Typhus fever, tick-borne (RMSF)			20	40	27	79	128	66
Rabies, animal			115	159	125	2,139	2,710	1,652

TABLE II. Notifiable diseases of low frequency, United States

	CUM 1982		CUM 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Utah 1, Calif. 1, Hawaii 1)	25	Paralytic	1
Cholera	–	Psittacosis (NYC 1)	33
Congenital rubella syndrome (Calif. 2)	5	Rabies, human	–
Diphtheria	–	Tetanus (W. Va. 1)	21
Leptospirosis (Texas 1, Wash. 1)	22	Trichinosis (NYC 1)	43
Plague	3	Typhus fever, flea-borne (endemic, murine)	5

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 15, 1982 and May 16, 1981 (19th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	62	43	274	24	328,965	354,281	417	371	46	151	4	69
NEW ENGLAND	2	–	12	4	8,062	8,673	6	18	1	4	–	1
Maine	–	–	–	–	354	440	–	1	–	–	–	–
N.H.	1	–	–	–	219	337	2	–	–	1	–	–
Vt.	–	–	–	–	169	145	–	–	–	–	–	–
Mass.	–	–	4	–	3,801	3,585	4	5	1	3	–	–
R.I.	–	–	–	–	555	435	–	2	–	–	–	–
Conn.	1	–	8	4	2,965	3,761	–	10	–	–	–	1
MID. ATLANTIC	12	–	42	3	43,012	41,720	47	47	4	10	1	4
Upstate N.Y.	1	–	15	–	6,622	6,772	25	16	3	2	–	1
N.Y. City	6	–	9	–	17,098	17,252	6	13	–	3	–	1
N.J.	5	–	10	–	7,106	9,026	16	18	1	5	1	1
Pa.	U	–	8	3	9,186	9,670	U	U	U	U	U	1
E.N. CENTRAL	7	–	52	6	45,095	55,152	35	37	2	18	–	–
Ohio	2	–	16	4	13,803	19,121	13	16	–	7	–	–
Ind.	–	–	13	2	5,347	4,729	7	5	2	5	–	–
Ill.	2	–	–	–	10,196	15,196	3	3	–	1	–	–
Mich.	2	–	21	–	11,281	11,328	8	11	–	5	–	–
Wis.	1	–	2	–	4,468	4,778	4	2	–	–	–	–
W.N. CENTRAL	1	4	15	2	15,985	16,436	11	13	2	4	–	–
Minn.	–	–	1	1	2,396	2,596	6	2	1	–	–	–
Iowa	1	1	8	1	1,749	1,713	1	1	–	3	–	–
Mo.	–	1	4	–	7,349	7,391	3	6	–	–	–	–
N. Dak.	–	–	–	–	228	224	–	–	–	–	–	–
S. Dak.	–	–	–	–	446	487	–	2	–	–	–	–
Nebr.	–	–	1	–	989	1,305	–	2	1	1	–	–
Kans.	–	2	1	–	2,828	2,720	1	–	–	–	–	–
S. ATLANTIC	17	13	39	5	80,948	86,862	39	87	10	24	2	4
Del.	–	–	–	–	1,328	1,303	1	1	–	–	–	–
Md.	–	–	10	–	10,725	9,472	1	15	3	4	1	2
D.C.	–	–	–	–	4,532	5,519	1	2	–	–	–	–
Va.	4	4	9	–	7,481	7,949	11	14	–	5	–	–
W. Va.	–	–	–	–	995	1,311	8	5	–	–	–	–
N.C.	2	–	4	1	14,059	13,546	6	4	–	4	–	–
S.C.	–	2	–	–	8,316	8,318	–	3	–	–	–	–
Ga.	–	1	–	–	9,483	17,314	1	19	1	1	–	–
Fla.	11	6	16	4	24,029	22,130	10	24	6	10	1	2
E.S. CENTRAL	3	5	15	1	28,545	29,333	21	32	3	3	–	–
Ky.	–	–	–	–	3,763	3,763	9	10	–	–	–	–
Tenn.	–	3	9	–	10,797	10,961	9	8	1	1	–	–
Ala.	3	1	5	1	8,812	9,238	1	9	2	2	–	–
Miss.	–	1	1	–	5,173	5,391	2	5	–	–	–	–
W.S. CENTRAL	9	11	30	–	47,426	47,155	120	40	1	40	–	8
Ark.	–	3	1	–	4,006	3,271	–	3	–	2	–	–
La.	–	2	4	–	8,614	7,412	11	10	1	2	–	–
Okla.	–	3	9	–	5,088	4,815	9	5	–	6	–	–
Tex.	9	3	16	–	29,718	31,657	100	22	–	30	–	8
MOUNTAIN	1	–	14	1	11,970	14,071	33	18	3	12	1	2
Mont.	–	–	–	–	489	507	1	1	–	–	–	–
Idaho	–	–	–	–	544	577	–	–	–	–	1	1
Wyo.	1	–	–	–	326	314	2	–	–	–	–	–
Colo.	–	–	4	1	3,143	3,748	4	3	–	–	–	–
N. Mex.	–	–	–	–	1,502	1,522	5	1	2	–	–	–
Ariz.	–	–	6	–	3,326	4,376	18	11	1	6	–	–
Utah	–	–	–	–	545	661	–	1	–	5	–	1
Nev.	–	–	4	–	2,095	2,366	3	1	–	1	–	–
PACIFIC	30	10	55	2	50,902	54,879	105	79	20	36	–	50
Wash.	1	–	5	–	4,259	4,755	38	13	6	3	–	5
Oreg.	1	–	1	–	2,798	3,679	5	2	–	1	–	–
Calif.	25	9	45	2	41,676	43,954	59	63	14	32	–	25
Alaska	–	1	3	–	1,277	1,417	–	–	–	–	–	1
Hawaii	3	–	1	–	892	1,074	3	1	–	–	–	19
Guam	U	–	–	–	29	53	U	U	U	U	U	–
P.R.	1	–	1	–	1,071	1,199	7	7	–	8	–	–
V.I.	U	–	–	–	60	48	U	U	U	U	U	–
Pac. Trust Terr.	U	–	–	–	36	152	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 15, 1982 and May 16, 1981 (19th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	15	274	68	563	1,390	62	1,332	119	2,803	10	78	1,165	1,121
NEW ENGLAND	1	19	-	7	51	6	77	3	134	1	-	9	87
Maine	-	-	-	-	4	-	2	2	29	-	-	-	32
N.H.	-	-	-	1	5	1	11	-	12	-	-	8	33
Vt.	-	-	-	2	2	-	4	-	4	1	-	-	-
Mass.	1	14	-	2	33	1	21	-	68	-	-	-	13
R.I.	-	1	-	-	-	1	10	-	10	-	-	1	-
Conn.	-	4	-	2	6	3	29	1	11	-	-	-	9
MID. ATLANTIC	2	31	8	41	415	12	220	1	176	3	3	67	129
Upstate N.Y.	-	6	8	23	177	6	58	1	36	2	2	33	53
N.Y. City	2	13	-	16	30	5	46	-	31	-	1	21	31
N.J.	-	8	-	-	41	1	48	-	30	1	-	13	41
Pa.	U	4	U	2	167	U	68	U	79	U	U	-	4
E.N. CENTRAL	1	18	-	31	67	8	161	48	1,631	-	2	101	53
Ohio	-	5	-	-	15	5	68	27	1,200	-	-	-	-
Ind.	-	1	-	1	6	-	13	-	25	-	-	18	88
Ill.	-	1	-	15	20	1	36	5	105	-	2	28	61
Mich.	-	9	-	15	25	2	33	16	230	-	-	38	29
Wis.	1	2	-	-	1	-	11	-	71	-	-	17	75
W.N. CENTRAL	1	8	-	2	4	3	56	42	236	1	1	27	69
Minn.	-	-	-	-	1	-	12	25	137	1	-	5	7
Iowa	-	3	-	-	1	-	5	1	24	-	-	-	1
Mo.	1	2	-	2	-	1	18	-	13	-	1	16	2
N. Dak.	-	-	-	-	-	-	4	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	1	-	-	1	-
Nebr.	-	2	-	-	1	-	4	-	-	-	-	-	1
Kans.	-	1	-	-	1	2	10	16	61	-	-	5	58
S. ATLANTIC	1	45	2	31	277	15	274	8	170	2	3	36	99
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	-	6	-	2	1	3	17	-	13	-	-	14	1
D.C.	-	3	-	1	1	-	1	-	-	-	-	-	-
Va.	-	16	-	14	3	2	28	4	27	2	-	10	3
W. Va.	1	2	-	1	7	-	7	-	72	-	-	1	17
N.C.	-	-	-	-	3	6	48	1	7	-	-	-	4
S.C.	-	3	-	-	-	-	32	-	9	-	-	1	6
Ga.	-	6	-	-	91	1	64	1	7	-	1	3	24
Fla.	-	9	2	13	171	3	77	2	32	-	2	7	44
E.S. CENTRAL	-	1	1	6	-	3	87	1	26	1	-	34	20
Ky.	-	1	-	1	-	-	13	-	9	-	-	19	12
Tenn.	-	-	-	4	-	2	35	1	10	-	-	-	8
Ala.	-	-	-	-	-	-	34	-	4	-	-	-	-
Miss.	-	-	1	1	-	1	5	-	3	1	-	15	-
W.S. CENTRAL	2	23	3	14	363	5	164	7	111	1	3	65	71
Ark.	-	3	-	-	-	-	8	1	6	-	-	-	-
La.	-	3	-	-	-	-	25	-	3	-	-	-	9
Okla.	-	2	-	-	5	2	14	-	-	-	-	2	-
Tex.	2	15	3	14	358	3	117	6	102	1	3	63	62
MOUNTAIN	-	6	-	-	21	2	78	1	41	-	-	31	56
Mont.	-	-	-	-	-	-	4	-	3	-	-	3	3
Idaho	-	-	-	-	-	1	6	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	-	5	1
Colo.	-	4	-	-	5	1	30	-	7	-	-	2	27
N. Mex.	-	1	-	-	4	-	11	-	-	-	-	2	4
Ariz.	-	1	-	-	2	-	14	-	14	-	-	7	11
Utah	-	-	-	-	-	-	6	1	11	-	-	10	3
Nev.	-	-	-	-	10	-	3	-	2	-	-	2	5
PACIFIC	7	123	54	428	192	8	217	8	278	1	66	795	337
Wash.	-	6	2	18	1	-	23	-	43	-	3	22	46
Oreg.	1	4	-	-	1	-	45	-	-	-	-	3	37
Calif.	6	111	52	408	188	8	137	6	225	1	63	762	250
Alaska	-	-	-	-	-	-	9	-	6	-	-	1	-
Hawaii	-	2	-	2	2	-	3	2	4	-	-	7	4
Guam	U	1	U	-	5	U	1	U	1	U	U	1	1
P.R.	-	4	4	61	152	-	3	-	26	-	-	4	3
V.I.	U	-	U	-	6	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 15, 1982 and May 16, 1981 (19th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	11,935	13,423	447	9,334	37	4	131	23	79	2,139
NEW ENGLAND	220	241	17	248	-	-	11	-	-	5
Maine	1	1	3	20	-	-	-	-	-	5
N.H.	-	9	-	9	-	-	-	-	-	-
Vt.	-	13	-	6	-	-	2	-	-	-
Mass.	155	150	9	169	-	-	8	-	-	-
R.I.	12	16	1	9	-	-	-	-	-	-
Conn.	52	52	5	35	-	-	1	-	-	-
MID. ATLANTIC	1,613	1,694	59	1,494	3	1	17	-	-	45
Upstate N.Y.	166	145	23	280	3	-	2	-	-	25
N.Y. City	942	1,057	25	577	-	1	12	-	-	-
N.J.	147	212	10	282	-	-	3	-	-	1
Pa.	265	280	U	355	-	U	-	U	-	19
E.N. CENTRAL	657	773	72	1,409	-	-	13	-	-	244
Ohio	115	103	7	247	-	-	6	-	-	33
Ind.	81	67	4	179	-	-	-	-	-	40
Ill.	297	410	33	564	-	-	3	-	-	105
Mich.	124	155	27	342	-	-	4	-	-	1
Wis.	40	38	1	77	-	-	-	-	-	65
W.N. CENTRAL	235	196	10	283	7	-	3	-	3	487
Minn.	41	72	-	47	-	-	-	-	-	80
Iowa	11	9	-	41	1	-	1	-	-	153
Mo.	145	96	7	131	5	-	1	-	1	54
N. Dak.	4	3	-	6	-	-	-	-	-	47
S. Dak.	-	2	3	10	-	-	-	-	-	34
Nebr.	8	3	-	12	-	-	-	-	-	55
Kans.	26	11	-	36	1	-	1	-	2	64
S. ATLANTIC	3,308	2,884	122	1,814	6	-	18	18	42	345
Del.	7	7	-	18	-	-	-	-	-	-
Md.	193	227	14	219	1	-	6	1	8	19
D.C.	237	255	8	71	-	-	-	-	-	-
Va.	241	275	12	200	1	-	2	2	2	167
W. Va.	8	7	3	49	-	-	2	-	-	18
N.C.	240	214	23	300	-	-	-	10	19	12
S.C.	153	197	12	176	3	-	2	5	12	21
Ga.	689	630	19	253	-	-	-	-	1	83
Fla.	1,573	970	31	528	1	-	6	-	-	25
E.S. CENTRAL	857	725	41	924	4	-	11	-	6	260
Ky.	42	33	7	229	-	-	-	-	-	45
Tenn.	237	290	16	276	4	-	2	-	2	180
Ala.	302	193	18	243	-	-	7	-	3	35
Miss.	276	209	-	76	-	-	2	-	1	-
W.S. CENTRAL	2,998	2,564	77	1,027	11	-	7	2	26	445
Ark.	80	49	10	101	6	-	-	-	2	61
La.	639	553	9	187	1	-	-	-	-	11
Okla.	64	69	-	139	4	-	2	1	15	93
Tex.	2,215	1,894	58	600	-	-	5	1	9	280
MOUNTAIN	301	273	13	269	3	1	6	-	1	55
Mont.	1	8	-	18	-	-	-	-	-	26
Idaho	17	2	-	11	1	-	-	-	1	-
Wyo.	9	4	-	2	1	-	-	-	-	2
Colo.	89	90	-	31	-	1	2	-	-	-
N. Mex.	61	60	2	49	-	-	-	-	-	6
Ariz.	67	51	7	112	-	-	3	-	-	21
Utah	13	7	1	15	1	-	1	-	-	-
Nev.	47	48	3	31	-	-	-	-	-	-
PACIFIC	1,744	1,576	77	1,726	3	2	45	-	1	253
Wash.	53	61	7	103	1	-	2	-	-	-
Oreg.	49	35	3	64	-	-	1	-	-	-
Calif.	1,595	1,445	53	1,411	2	2	41	-	1	186
Alaska	4	4	-	18	-	-	-	-	-	67
Hawaii	46	31	14	130	-	-	1	-	-	-
Guam	-	-	U	2	-	U	-	U	-	-
P.R.	221	259	-	116	-	-	1	-	-	20
V.I.	-	4	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending May 15, 1982(19th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	676	464	141	30	21	20	44
Boston, Mass.	176	101	42	11	9	13	16
Bridgeport, Conn.	48	35	11	1	1	-	-
Cambridge, Mass.	19	16	3	-	-	-	4
Fall River, Mass.	30	22	7	1	-	-	1
Hartford, Conn.	60	45	5	6	1	3	1
Lowell, Mass.	16	10	5	1	-	-	1
Lynn, Mass.	17	13	3	1	-	-	-
New Bedford, Mass.	26	23	2	-	1	-	-
New Haven, Conn.	53	32	16	3	2	-	1
Providence, R.I.	71	50	15	4	2	-	6
Somerville, Mass.	7	6	1	-	-	-	-
Springfield, Mass.	54	35	14	1	2	2	5
Waterbury, Conn.	39	29	7	1	1	1	5
Worcester, Mass.	60	47	10	-	2	1	4
MID. ATLANTIC	2,580	1,672	594	193	60	61	77
Albany, N.Y.	66	47	12	2	4	1	2
Allentown, Pa.	18	16	2	-	-	-	-
Buffalo, N.Y.	100	68	23	5	2	2	5
Camden, N.J.	38	24	11	1	1	1	-
Elizabeth, N.J.	22	15	4	3	-	-	1
Erie, Pa.†	44	34	8	1	1	-	-
Jersey City, N.J.	65	49	10	2	3	1	-
N.Y. City, N.Y.	1,416	908	326	119	31	32	32
Newark, N.J.	58	28	18	6	1	3	4
Paterson, N.J.	33	18	9	3	2	2	-
Philadelphia, Pa.†	276	150	76	31	13	6	12
Pittsburgh, Pa.†	63	42	13	4	1	3	3
Reading, Pa.	24	18	4	-	2	-	2
Rochester, N.Y.	119	83	20	8	2	7	9
Schenectady, N.Y.	31	20	10	-	1	-	1
Scranton, Pa.†	24	17	5	1	1	-	1
Syracuse, N.Y.	91	66	17	4	2	2	1
Trenton, N.J.	47	33	8	4	1	1	-
Utica, N.Y.	18	15	3	-	-	-	3
Yonkers, N.Y.	29	23	6	-	-	-	1
E.N. CENTRAL	2,379	1,485	566	152	79	97	85
Akron, Ohio	48	32	11	1	1	3	-
Canton, Ohio	35	24	9	1	1	-	2
Chicago, Ill.	584	327	147	56	28	26	15
Cincinnati, Ohio	130	85	26	9	3	7	14
Cleveland, Ohio	190	119	46	6	4	15	3
Columbus, Ohio	179	106	44	13	3	13	2
Dayton, Ohio	96	70	20	3	1	2	5
Detroit, Mich.	290	162	83	27	12	6	7
Evansville, Ind.	39	30	7	1	1	-	1
Fort Wayne, Ind.	49	35	12	1	1	-	6
Gary, Ind.	14	8	-	3	3	-	-
Grand Rapids, Mich.	63	42	15	2	2	2	-
Indianapolis, Ind.	144	85	37	10	6	6	5
Madison, Wis.	35	19	10	3	1	2	2
Milwaukee, Wis.	107	69	26	5	4	3	3
Peoria, Ill.	51	36	10	2	1	2	5
Rockford, Ill.	43	30	12	1	-	-	3
South Bend, Ind.	49	37	7	3	1	1	3
Toledo, Ohio	182	139	28	3	6	6	9
Youngstown, Ohio	51	30	16	2	-	3	-
W.N. CENTRAL	676	455	137	41	21	22	28
Des Moines, Iowa	69	46	14	6	2	1	1
Duluth, Minn.	19	17	1	-	1	-	3
Kansas City, Kans.	23	11	6	3	2	1	1
Kansas City, Mo.	102	61	25	1	6	9	4
Lincoln, Nebr.	26	22	3	1	-	-	-
Minneapolis, Minn.	84	57	18	6	-	3	1
Omaha, Nebr.	71	60	6	3	-	2	2
St. Louis, Mo.	131	90	29	10	2	1	5
St. Paul, Minn.	74	61	9	1	2	1	2
Wichita, Kans.	77	30	27	10	6	4	9
S. ATLANTIC	1,317	753	341	126	49	49	45
Atlanta, Ga.	119	67	39	10	1	2	1
Baltimore, Md.	196	116	52	16	7	3	5
Charlotte, N.C.	79	54	18	3	2	2	4
Jacksonville, Fla.	95	45	29	10	4	7	1
Miami, Fla.	101	58	28	9	4	2	1
Norfolk, Va.	51	26	20	3	-	2	2
Richmond, Va.	77	48	19	4	3	3	8
Savannah, Ga.	49	24	14	6	2	3	7
St. Petersburg, Fla.	80	66	11	2	1	-	1
Tampa, Fla.	64	36	20	2	3	3	3
Washington, D.C.	354	180	79	59	19	16	12
Wilmington, Del.	54	33	12	-	3	6	-
E.S. CENTRAL	644	371	163	44	19	47	24
Birmingham, Ala.	110	61	30	9	2	8	-
Chattanooga, Tenn.	51	31	12	4	2	2	2
Knoxville, Tenn.	46	28	13	2	-	3	-
Louisville, Ky.	101	61	28	7	1	4	4
Memphis, Tenn.	147	73	34	12	8	20	8
Mobile, Ala.	55	33	15	5	2	-	4
Montgomery, Ala.	44	29	9	2	1	3	2
Nashville, Tenn.	90	55	22	3	3	7	4
W.S. CENTRAL	1,298	733	349	104	69	43	39
Austin, Tex.	48	27	14	4	-	3	1
Baton Rouge, La.	54	35	9	4	5	1	1
Corpus Christi, Tex.	49	25	16	4	2	2	-
Dallas, Tex.	152	86	40	10	11	5	1
El Paso, Tex.	64	35	17	3	5	4	3
Fort Worth, Tex.	115	77	23	9	3	3	7
Houston, Tex.	334	157	109	43	16	9	5
Little Rock, Ark.	75	42	22	4	3	4	5
New Orleans, La.	89	41	32	11	3	2	-
San Antonio, Tex.	157	103	30	6	15	3	4
Shreveport, La.	58	36	18	1	2	1	4
Tulsa, Okla.	103	69	19	5	4	6	8
MOUNTAIN	585	346	132	51	36	20	25
Albuquerque, N. Mex.	94	39	30	17	7	1	1
Colo. Springs, Colo.	19	13	3	1	1	1	3
Denver, Colo.	103	61	23	4	4	11	4
Las Vegas, Nev.	71	46	14	7	4	-	1
Ogden, Utah	24	15	6	1	-	2	1
Phoenix, Ariz.	129	69	31	15	10	4	4
Pueblo, Colo.	15	11	2	2	-	-	4
Salt Lake City, Utah	43	30	5	4	4	-	2
Tucson, Ariz.	87	62	18	-	6	1	5
PACIFIC	1,903	1,275	389	108	63	67	103
Berkeley, Calif.	23	15	4	3	-	1	2
Fresno, Calif.	76	53	9	3	5	6	2
Glendale, Calif.	26	22	2	-	-	2	2
Honolulu, Hawaii	62	50	6	4	1	1	6
Long Beach, Calif.	100	74	18	3	1	4	5
Los Angeles, Calif.	534	358	112	41	13	9	30
Oakland, Calif.	82	51	16	5	6	4	4
Pasadena, Calif.	32	19	9	3	1	1	3
Portland, Oreg.	107	79	17	2	3	6	4
Sacramento, Calif.	85	60	18	2	4	1	6
San Diego, Calif.	138	88	35	5	5	5	13
San Francisco, Calif.	176	105	52	9	5	5	4
San Jose, Calif.	185	110	34	19	11	11	7
Seattle, Wash.	164	115	33	6	6	4	5
Spokane, Wash.	66	43	13	3	2	5	9
Tacoma, Wash.	47	33	12	-	-	2	1
TOTAL	12,058††	7,554	2,802	847	425	426	470

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

Current Trends

Urban Rat Control — United States

During the first quarter of fiscal year 1982, urban rat-control programs in 56 communities achieved maintenance status* in 910 blocks and identified 1,231 environmentally improved blocks (EIB).† Program services were provided to almost 2.8 million people in over 19,000 blocks.

Since 1969, local programs have provided services benefiting almost 9 million people in approximately 61,000 blaocks. Of these blocks, 17,896 remain in operational areas, but 43,046 have been removed from these areas and classified as EIB. As a result of program accomplishments, 7.7 million people now live in rat-free, environmentally improved neighborhoods.

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*Blocks that have limited environmental deficiencies and are essentially rat-free.

†Blocks that have remained in maintenance for at least 1 year and no longer require intensive rat control efforts.

TABLE 1. Status of target-area blocks in urban rat-control programs, first quarter, fiscal year 1982 (October 1-December 31, 1981)

Program community	Target-area blocks				Environmentally improved blocks*	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			<12 months	≥12 months		
REGION I	904	513	264	127	0	1,154
Bridgeport	204	120	85	15	0	0
Hartford	317	154	101	62	0	313
Boston	367	239	78	50	0	53
Previously funded programs						768
REGION II	3,324	1,231	921	784	148	5,641
Atlantic City	202	20	81	26	0	0
Camden	232	134	60	38	0	119
Jersey City	183	51	94	38	0	260
Newark	201	11	35	30	100	143
New York City	1,134	412	292	430	0	1,219
Rochester	174	76	71	27	48	494
Yonkers	80	60	20	0	0	145
Aguadilla	201	95	11	9	0	254
Arecibo	102	36	66	0	0	291
Guayama	176	131	45	0	0	40
Mayaguez	155	67	72	16	0	230
Ponce	226	41	14	69	0	378
San Juan	258	97	60	101	0	405
Previously funded programs						1,654
REGION III	2,931	1,221	895	407	207	8,153
"War on Rats"	915	401	278	55	89	1,322
Chester	181	62	59	39	0	116
NE Pa. V.C. Assn.†	531	207	91	118	10	1,364
Philadelphia	934	445	379	110	82	1,646
Pittsburgh	370	106	88	85	26	1,496
Previously funded programs						2,209

Rat Control – Continued

TABLE 1. Status of target-area blocks in urban rat-control programs, first quarter, fiscal year 1982 (October 1-December 31, 1981) – *Continued*

Program community	Target-area blocks				Environmentally improved blocks[*]	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			<12 months	≥12 months		
REGION IV	3,524	1,608	1,343	332	514	8,377
Mobile	71	38	33	0	0	669
Tuscaloosa	253	42	171	40	42	91
Miami	1,515	714	632	169	91	1,194
Pensacola	183	89	94	0	84	406
Atlanta, Ga.[‡]	732	406	76	9	0	0
DeKalb Co. Ga	66	66	0	0	269	674
Louisville	480	179	256	45	0	770
Memphis	224	74	81	69	28	592
Previously funded programs						3,981
REGION V	4,892	1,620	1,852	492	189	5,697
Chicago	485	222	238	25	5	15
Peoria	249	9	86	154	0	75
Indianapolis	351	43	308	0	0	417
Benton Harbor	87	29	16	42	0	103
Detroit	1,210	309	133	0	0	706
Highland Park	148	69	58	21	0	72
Saginaw	355	119	155	81	0	108
Washtenaw Co.-Ypsilanti	275	74	170	31	0	0
Wayne Co.-Ecorse	388	118	85	25	0	0
Akron	169	63	96	10	25	695
Barberton	115	1	102	12	7	182
Cincinnati	112	34	78		12	200
Cleveland	301	225	76	0	11	746
Columbus	180	66	63	51	102	385
Toledo	138	36	102	0	11	200
Youngstown	194	93	61	40	16	26
Milwaukee	135	110	25	0	0	0
Previously funded programs						1,767
REGION VI	1,369	698	471	200	30	7,039
Little Rock	349	81	175	93	0	53
Pine Bluff	175	66	80	29	0	233
New Orleans	301	164	59	78	0	3,139
Houston	544	387	157	0	30	2,356
Previously funded programs						1,258
REGION VII	558	143	340	75	26	4,312
Kansas City, Mo	124	54	70	0	0	747
St. Louis	244	41	147	56	0	1,168
Omaha	190	48	123	19	26	760
Previously funded programs						1,637
REGION IX	394	175	192	27	117	1,843
Los Angeles	61	16	41	4	69	504
Oakland	179	76	95	8	8	287
San Francisco	154	83	56	15	40	381
Previously funded programs						671
Region X						830
Previously funded programs						830
Total	17,896	7,209	6,278	2,444	1,231	43,046

[*] Contiguous blocks where maintenance has been achieved and sustained for a minimum of 12 months. These blocks are no longer part of the approved project target area.

[†] Northwestern Pennsylvania Vector Control Association. Serves Lackawanna and Luzerne counties and the cities of Nanticoke, Wilkes-Barre, and Hazleton.

[‡] Target-area blocks are confined to public housing projects.

Rocky Mountain Spotted Fever — United States, 1981

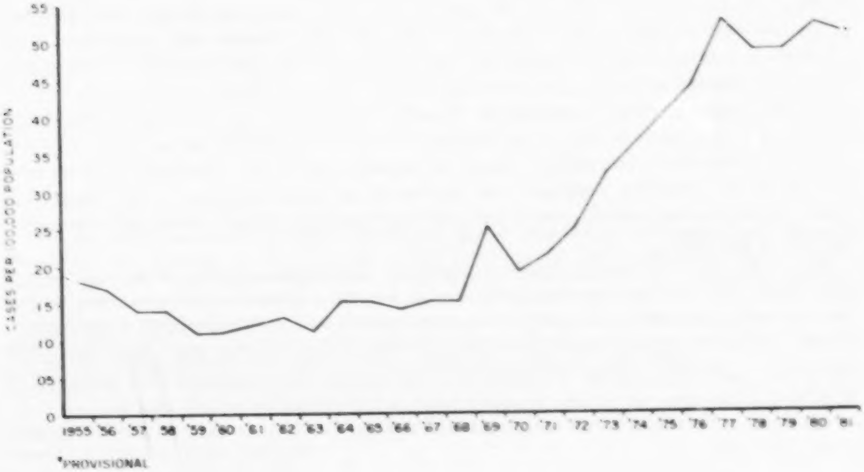
A provisional total of 1,170 cases of Rocky Mountain spotted fever (RMSF) occurring in the United States in 1981 have been reported to CDC. On the basis of this figure, the incidence rate of RMSF in 1981 for the United States as a whole was 0.51 cases/100,000 population.

The South-Atlantic states accounted for 671 (57%) of the reported cases. The highest rates of RMSF were for North Carolina (301 cases, 5.06/100,000), South Carolina (102 cases, 3.22/100,000), Oklahoma (99 cases, 3.19/100,000), Virginia (105 cases, 1.93/100,000), Tennessee (82 cases, 1.78/100,000), Maryland (66 cases, 1.55/100,000), and Arkansas (35 cases, 1.53/100,000).

States submitted case-report forms on 1,059 (91%) of the reported cases. Of these, 372 (35%) were confirmed by complement-fixation (CF), indirect fluorescent-antibody (IFA), indirect hemagglutination (IHA), latex-agglutination (LA), or microagglutination (MA) tests; isolation of spotted fever group rickettsiae; or fluorescent-antibody staining of biopsy or autopsy specimens. An additional 129 patients (12%), whose specimens reacted positively in the Weil-Felix agglutination test, but were not tested by other methods, were designated as having "probable" cases. The other 558 cases (53%) were reported on the basis of clinical diagnosis alone. Sixty percent of the patients were male, 53% were persons <20 years of age, and 92% were white.

Ninety-six percent of the patients became ill between April 1 and September 30. Symptoms reported included fever (98%), headache (90%), rash on torso (85%), and rash on palms

FIGURE 1. Rocky Mountain spotted fever (tick-borne typhus), reported cases per 100,000 population, by year, United States, 1955-1981



*PROVISIONAL

Rocky Mountain Spotted Fever – Continued

of hands or soles of feet (60%). Rash was significantly more commonly associated with laboratory-confirmed (89%) than with unconfirmed (82%) cases ($p<0.01$); otherwise, the prevalence of symptoms was similar for these 2 groups of patients. Seventy-nine percent of patients were hospitalized during their illness. Sixty-seven percent of the patients for whom exposure information was available reported a tick bite or attachment within 14 days before onset of illness. The case-fatality rate (3.4%) was higher for blacks (6.7%) than whites (3.0%), higher for persons ≥30 years of age (4.6%) than for younger individuals (2.8%), higher for persons with unknown or no tick exposure (4.4%) than for persons reporting a tick bite or attachment (2.6%), and higher for persons not reporting treatment with tetracycline or chloramphenicol (8.0%) than for those who received such antibiotic therapy (2.5%).

Twenty-five percent of patients for whom the history was available reported travel outside of the county of residence within 14 days before onset of illness.

Reported by participating state and territorial health depts; Consolidated Surveillance and Communications Activity, Epidemiology Program Office, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Following the rapid rise in the 1970s of RMSF incidence in the United States, infection rates since 1977 have remained about the same (Figure 1). The predominant occurrence of RMSF in the southeastern states and the higher incidence for younger persons, males, and whites have remained unchanged in recent years. The case-fatality rate, which has fluctuated between 3% and 8% since 1970, indicates that RMSF remains a serious illness that requires prompt diagnosis and early treatment with tetracycline or chloramphenicol. Risk factors that have been associated with fatalities include age ≥30 years, male sex, black race, absence of skin rash, failure to obtain a history of exposure to ticks, and lack of appropriate antibiotic treatment (*1*). A history of travel to an area in which infected ticks are endemic may be critical to the diagnosis of RMSF when a patient is seen in an area where the disease does not commonly occur.

An important change in the method of conducting national surveillance of RMSF in 1981 was the adoption of a new case-report form that provides information about symptoms, hospitalization, treatment, tick exposure, and travel, and also defines stricter criteria for laboratory confirmation of cases. A clinically compatible case with diagnostic serologic results determined by CF, IFA, IHA, LA, or MA is considered confirmed (a case with positive titers obtained by the Weil-Felix reaction is only considered a probable case). Patients from whom the causative agent is isolated, or who have positive fluorescent-antibody staining of tissue specimens, are also considered to have confirmed cases. These stricter criteria are responsible for the lower percentage of cases confirmed by laboratory testing in 1981 compared with 1980 (35% versus 62%, respectively). It should be emphasized that confirmation of RMSF is of epidemiologic importance but cannot usually be expected to occur before days 10-14 after onset of illness. Therefore, diagnosis must rely on clinical (fever, headache, rash, myalgia) and epidemiologic (tick exposure) criteria, and treatment must be initiated before laboratory confirmation is available.

Prevention of RMSF entails frequent inspection of persons for ticks when exposure is likely. (Ticks do not usually transmit infection until they have been attached for several hours.) Ticks are best removed by grasping the tick with tweezers as close as possible to the point of attachment and by pulling slowly and steadily. If tweezers are not available, fingers protected with facial tissue may be used. If bare hands touch the tick during removal, the hands should be washed thoroughly with soap and water, because tick secretions can be infective.

A vaccine against RMSF is in the developmental stage, but is not expected to be available in the near future.

Rocky Mountain Spotted Fever – Continued

References

1. Hattwick MA, O'Brien RJ, Hanson BF. Rocky Mountain spotted fever: epidemiology of an increasing problem. Ann Intern Med 1976;84:732-9.

Erratum, Vol 31, No. 13

p161. In the article "Common-Source Outbreaks of Trichinosis—New York City, Rhode Island" the sentence beginning on line 14, page 162, should read in part: The symptoms plus eosinophilia and elevated creatine phosphokinase (CPK) levels suggested trichinosis;

Erratum, Vol. 31, No. 16

p213. In the article "Introduced Autochthonous *Vivax* Malaria—California, 1980-1981" one name in the credits was misspelled. It should read: T Rowsell, MD, Loma Linda University Medical Center. Also, 3 more names should be added to the credits: G Grodhaus, EE Lusk, R Yescott, Vector Biology and Control Section, California Dept of Health Svcs.

The Morbidity and Mortality Weekly Report, circulation 106,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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CENTERS FOR DISEASE CONTROL

MMWR

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Current Trends

National Surveillance of Cocaine Use and Related Health Consequences

A recent report on extensive surveillance of cocaine use and related health consequences compiled by the National Institute on Drug Abuse (NIDA) of the U.S. Public Health Service is discussed below.

An initial report from the early 1970s stated that little cost to society attributed to cocaine use had been verified in the United States (*1*). This pattern of low cost was believed to reflect the route of administration most commonly used, i.e., sniffing or "snorting," and an estimated low prevalence of chronic use. However, use of cocaine has increased substantially in the United States since that time. A more recent report indicates that almost 10 million people over the age of 11 years reported having used cocaine during the year preceding the survey, and almost half of these had used cocaine during the month before the survey (*2*). Two-thirds of these self-reported cocaine users were between the ages of 18 and 25 years. Overall, the number of people in the United States reporting cocaine use in 1979 was more than double that in 1977 (*3*). Additional survey data from 1975 through 1981 show a similar trend for graduating high school seniors (*4*). There was a substantial increase in the number of these students who reported having used cocaine both during the year and the month preceding the survey, i.e., from 5.6% to 12.4% and from 1.9% to 5.8%, respectively.

The recent marked increase in the prevalence of cocaine use is also reflected in health consequences associated with use. Figure 1 shows data on morbidity and mortality associated with cocaine use reported to the Drug Abuse Warning Network (DAWN)* (*5*) and the rate of

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*DAWN is a morbidity- and mortality-information system, funded by NIDA, in which data are collected from a non-random sample of more than 800 hospitals located in 26 major metropolitan areas in the continental United States and in a national panel of hospitals outside these areas, and from medical examiners/coroners located in the 26 major metropolitan areas.

TABLE 1. Number of cocaine-related emergency-room cases reported to DAWN, by age and sex, January 1977-November 1981, United States

	Male		Female		Total	
Age in years	**No.**	**%**	**No.**	**%**	**No.**	**%**
<20	772	8.5	683	15.8	1,455	10.8
20-29	4,969	54.5	2,637	61.1	7,606	56.6
30-39	2,594	28.4	809	18.8	3,403	25.3
≥40	737	8.1	156	3.6	893	6.7
Not recorded	51	0.5	29	0.7	80	0.6
Total	9,123	100.0	4,314	100.0	13,437	100.0

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Cocaine Use — Continued

treatment-program admissions for problems related to cocaine use reported to the Client-Oriented Data Acquisition Process (CODAP)† (*6*). As the figure shows, there was a more than 3-fold increase in the rate of cocaine-related emergencies/10,000 emergencies (from 0.7 to 2.3) and the rate of cocaine-related deaths/10,000 medical-examiner reports (from 4.5 to 19.1) between 1976 and 1980-1981. At the same time, the percentage of cocaine-related treatment-program admissions increased more than 6-fold in the period 1975-1981.

Males associated with reported non-fatal cocaine-related emergencies outnumber females by more than 2 to 1 (Table 1), a ratio that is consistent with prevalence estimates for current use of cocaine. The prevalence ratio for cocaine use is 7 to 1 for whites compared with all

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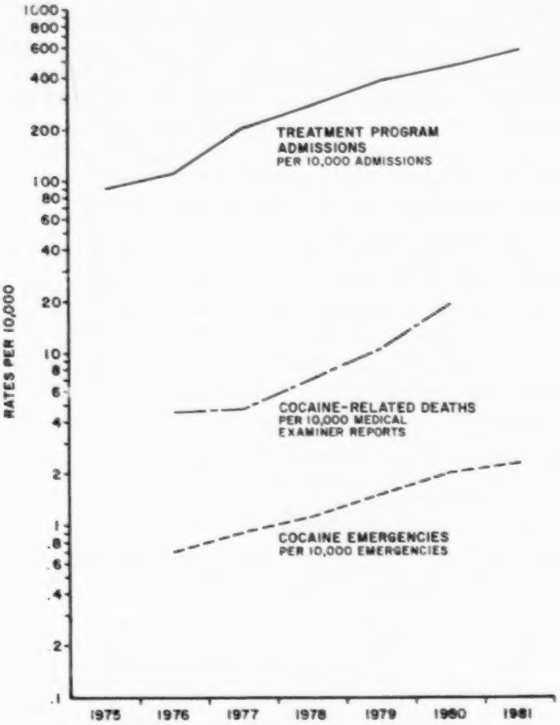
†CODAP was a drug-abuse treatment-program information system, operated by NIDA, through 1981, in which data were collected for persons admitted to all federally funded treatment programs in the United States.

FIGURE 1. Rates of emergencies, deaths, and treatment program admissions associated with primary cocaine use, DAWN and CODAP, United States, 1975-1981*



*Preliminary data for treatment program admissions in 1981.

Source: National Institute on Drug Abuse Statistical Series D, U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse and Mental Health Administration.

Drug Abuse Warning Network, DECHIST 1981 Tape, National Institute on Drug Abuse, U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse and Mental Health Administration.

Cocaine Use – Continued

other races; the emergency cases for which race/ethnicity is recorded are about equally distributed between whites and others (Table 2). Clear age differences exist, however, in both sex and race categories, with females being younger than males and whites being younger than blacks.

Despite regional variability in cocaine-related morbidity rates, almost all metropolitan areas reporting to DAWN have shown substantial increases in the period 1976-1981 (Table 3). Although a portion of the increase may have resulted from improved reporting—

TABLE 2. Number of cocaine-related emergency-room cases reported to DAWN, by age and race, January 1977-November 1981, United States

	White		Black		Other		Not recorded		Total	
Age in years	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
<20	891	15.5	311	6.0	62	9.7	191	10.4	1,455	10.8
20-29	3,516	61.3	2,716	52.1	355	55.6	1,019	55.3	7,606	56.6
30-39	1,121	19.5	1,633	31.3	165	25.9	484	26.3	3,403	25.3
≥40	187	3.3	529	10.1	53	8.3	124	6.7	893	6.7
Not recorded	24	0.4	29	0.5	3	0.5	24	1.3	80	0.6
Total	5,739	100.0	5,218	100.0	638	100.0	1,842	100.0	13,437	100.0

TABLE 3. Rate of non-fatal cocaine-related emergencies reported to DAWN/100,000 emergencies, by metropolitan area, 1976-1981, United States

Metropolitan area	1976	1981
San Francisco	1.5	9.3
New York	2.1	9.0
Miami	5.9	6.3
Denver	0.4	3.4
Washington, D.C.	0.3	3.1
Seattle	0.9	2.6
San Diego	1.0	2.2
Los Angeles	0.3	2.1
Atlanta	0.4	1.8
Phoenix	2.0	1.8
Boston	0.3	1.7
Chicago	0.5	1.6
Detroit	0.5	1.6
New Orleans	0.1	1.6
Baltimore	0.5	1.4
Cleveland	0.2	1.3
Kansas City	0.3	1.2
Buffalo	0.3	1.0
Minneapolis	0.4	0.8
Philadelphia	0.2	0.7
Oklahoma City	0.0	0.6
Indianapolis	0.2	0.5
St. Louis	0.0	0.4
Norfolk	0.3	0.4
Dallas	0.1	0.3
San Antonio	0.0	0.2
All other facilities in DAWN	0.1	0.6
National total	0.7	2.3

Cocaine Use – Continued

which may reflect a greater awareness among emergency-room staff of the potential implications of cocaine use—much of the increase is due to actual increased prevalence, including use of cocaine in combination with other substances. For example, 6% of all cocaine-related emergencies reported to DAWN in 1980 were reported in combination with the use of other substances, including alcohol.

Data on treatment support the conclusion that changes have occurred in patterns of cocaine use. Table 4 shows changes indicating increases in smoking and intravenous use in the period 1977-1980. Both these routes of administration result in more immediate and direct absorption of the drug and produce a quicker and more intense euphoria, while, at the same time, substantially increasing the possibility of acute toxic reaction.

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(Continued on page 273)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE	20th WEEK ENDING			CUMULATIVE, FIRST 20 WEEKS		
	May 22 1982	May 23 1981	MEDIAN 1977-1981	May 22 1982	May 23 1981	MEDIAN 1977-1981
Aseptic meningitis	59	88	64	1,479	1,351	965
Brucellosis	1	–	6	43	49	62
Encephalitis: Primary (arthropod-borne & unspec.)	9	17	12	285	268	236
Post-infectious	2	4	7	26	37	74
Gonorrhea: Civilian	15,513	20,021	19,246	345,000	374,302	362,024
Military	532	552	552	10,245	11,130	10,451
Hepatitis: Type A	330	506	554	8,510	9,732	10,910
Type B	431	387	290	7,781	7,452	6,227
Non A, Non B	49	N	N	795	N	N
Unspecified	168	217	213	3,456	4,199	3,867
Legionellosis	13	N	N	134	N	N
Leprosy	4	5	4	73	83	61
Malaria	29	10	17	303	490	194
Measles (rubeola)	31	140	843	591	1,530	8,546
Meningococcal infections: Total	55	51	51	1,396	1,803	1,286
Civilian	55	51	51	1,392	1,798	1,274
Military	–	–	–	4	5	10
Mumps	150	100	353	2,976	2,072	7,774
Pertussis	20	13	20	406	390	409
Rubella (German measles)	130	45	724	1,293	1,166	7,526
Syphilis (Primary & Secondary): Civilian	570	636	427	12,512	11,559	9,220
Military	6	5	5	155	136	117
Tuberculosis	554	503	582	9,662	9,853	10,270
Tularemia	3	8	3	40	54	41
Typhoid fever	7	9	8	138	174	146
Typhus fever, tick-borne (RMSF)	32	29	33	110	157	106
Rabies, animal	128	154	111	2,283	2,864	1,763

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (NYC 1, Hawaii 1)	27	Paralytic	1
Cholera	–	Psittacosis (N.J. 3, Wash. 2, Calif. 1)	39
Congenital rubella syndrome	5	Rabies, human	–
Diphtheria	–	Tetanus (S.C. 1, Ala. 1, Texas 2, N. Mex. 1)	26
Leptospirosis (Maine 1, Texas 1)	24	Trichinosis (N.J. 1, Ohio 1, Tenn. 1)	46
Plague	3	Typhus fever, flea-borne (endemic, murine) (Texas 2)	7

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 22, 1982 and May 23, 1981 (20th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	59	43	285	26	345,800	374,302	330	431	49	168	13	73
NEW ENGLAND	-	-	14	4	8,476	9,223	8	25	4	14	2	1
Maine	-	-	-	-	376	465	-	5	-	-	-	-
N.H.	-	-	-	-	233	325	1	-	-	-	-	-
Vt.	-	-	-	-	179	157	-	-	1	-	-	-
Mass.	-	-	4	-	3,968	3,795	3	9	-	11	-	-
R.I.	-	-	-	-	573	458	3	7	2	1	-	-
Conn.	-	-	10	4	3,147	4,015	1	4	1	2	2	1
MID. ATLANTIC	6	-	42	5	42,673	44,206	26	63	-	13	-	4
Upstate N.Y.	1	-	15	1	6,923	7,035	6	14	-	3	-	1
N.Y. City	1	-	9	-	17,938	18,358	12	20	-	5	-	1
N.J.	-	-	10	-	7,659	8,699	8	29	-	5	-	1
Pa.	4	-	8	4	10,153	10,064	U	U	U	U	-	1
E.N. CENTRAL	5	-	57	6	46,884	58,934	47	49	-	5	10	-
Ohio	1	-	17	4	14,293	20,632	15	18	-	-	10	-
Ind.	1	-	14	2	5,483	5,278	7	3	-	2	-	-
Ill.	-	-	-	-	10,419	16,075	8	8	-	1	-	-
Mich.	1	-	24	-	11,975	11,928	12	20	-	2	-	-
Wis.	2	-	2	-	4,714	5,021	5	-	-	-	-	-
W.N. CENTRAL	1	4	15	2	16,655	17,395	5	7	4	6	-	-
Minn.	1	-	1	1	2,527	2,796	2	5	2	1	-	-
Iowa	-	1	8	1	1,822	1,781	2	-	1	1	-	-
Mo.	-	1	4	-	7,560	7,907	1	1	1	4	-	-
N. Dak.	-	-	-	-	234	237	-	-	-	-	-	-
S. Dak.	-	-	-	-	479	506	-	1	-	-	-	-
Nebr.	-	-	1	-	1,047	1,355	-	-	-	-	-	-
Kans.	-	2	1	-	2,986	2,813	-	-	-	-	-	-
S. ATLANTIC	16	12	39	5	84,143	91,600	44	97	9	27	-	5
Del.	-	-	-	-	1,408	1,371	1	1	-	1	-	-
Md.	-	-	10	-	11,511	9,991	2	14	3	3	-	2
D.C.	2	-	-	-	4,784	5,813	2	10	-	-	-	-
Va.	-	3	9	-	7,840	8,364	1	6	-	1	-	1
W. Va.	-	-	-	-	1,049	1,376	3	1	-	-	-	-
N.C.	3	-	4	1	14,790	14,335	3	12	-	2	-	-
S.C.	1	2	-	-	8,658	8,675	9	16	2	1	-	-
Ga.	2	1	-	-	9,483	18,314	4	17	-	3	-	-
Fla.	8	6	16	4	24,620	23,357	19	20	4	16	-	2
E.S. CENTRAL	4	5	15	1	29,798	30,510	5	22	1	4	-	-
Ky.	-	-	-	-	3,919	3,853	-	3	-	-	-	-
Tenn.	2	3	9	-	11,467	11,528	4	12	-	3	-	-
Ala.	1	1	5	1	9,052	9,454	-	7	1	1	-	-
Miss.	1	1	1	-	5,360	5,677	1	-	-	-	-	-
W.S. CENTRAL	8	12	31	-	50,106	49,865	59	44	-	49	1	8
Ark.	-	3	1	-	4,150	3,450	3	5	-	3	-	-
La.	2	2	4	-	9,073	7,966	9	4	-	2	-	-
Okla.	-	3	9	-	5,361	5,143	2	8	-	5	1	-
Tex.	6	4	17	-	31,522	33,306	45	27	-	39	-	8
MOUNTAIN	-	-	14	1	12,613	14,858	40	19	6	12	-	2
Mont.	-	-	-	-	504	515	-	-	-	-	-	-
Idaho	-	-	-	-	596	630	2	-	-	-	-	1
Wyo.	-	-	-	-	338	331	3	-	1	-	-	-
Colo.	-	-	4	1	3,283	3,985	5	7	-	2	-	-
N. Mex.	-	-	-	-	1,569	1,662	10	-	3	-	-	-
Ariz.	-	-	6	-	3,514	4,595	13	2	2	3	-	-
Utah	-	-	-	-	965	698	3	2	-	3	-	1
Nev.	-	-	4	-	2,244	2,442	4	8	-	4	-	-
PACIFIC	19	10	58	2	53,652	57,711	96	105	25	30	-	53
Wash.	-	-	5	-	4,385	4,987	5	10	2	1	-	5
Oreg.	-	-	1	-	2,956	3,839	6	3	-	1	-	-
Calif.	14	9	48	2	44,046	46,310	76	85	23	35	-	28
Alaska	-	1	3	-	1,335	1,479	2	4	-	-	-	1
Hawaii	5	-	1	-	930	1,096	7	3	-	1	-	19
Guam	U	-	-	-	33	55	U	U	U	U	U	-
P.R.	-	-	1	-	1,133	1,268	2	7	-	5	-	-
V.I.	U	-	-	-	60	48	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	158	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 22, 1982 and May 23, 1981 (20th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	29	303	31	541	1,530	55	1,396	150	2,976	20	130	1,293	1,166
NEW ENGLAND	1	20	-	7	62	3	80	8	140	2	1	10	95
Maine	-	-	-	-	5	-	2	3	32	1	-	-	32
N.H.	-	-	-	1	6	-	11	-	12	-	-	8	38
Vt.	-	-	-	2	2	-	4	-	4	-	-	-	-
Mass.	1	15	-	2	43	1	22	2	70	-	-	-	15
R.I.	-	1	-	-	-	1	11	-	10	1	-	1	-
Conn.	-	4	-	2	6	1	30	1	12	-	1	1	10
MID. ATLANTIC	4	35	7	48	470	13	243	2	201	2	3	70	134
Upstate N.Y.	2	8	2	25	180	2	60	-	36	-	-	33	53
N.Y. City	1	14	2	19	38	1	47	1	32	2	3	24	36
N.J.	1	9	2	2	43	4	52	-	30	-	-	13	41
Pa.	-	4	1	3	209	6	84	1	103	-	-	-	4
E.N. CENTRAL	2	20	-	31	69	6	167	77	1,708	4	14	115	262
Ohio	1	6	-	-	15	-	68	64	1,264	-	-	-	-
Ind.	-	1	-	1	6	-	13	-	25	-	-	18	91
Ill.	-	1	-	15	20	5	41	5	110	4	14	42	62
Mich.	1	10	-	15	26	1	34	8	238	-	-	38	31
Wis.	-	2	-	-	1	-	11	-	71	-	-	17	76
W.N. CENTRAL	1	9	17	19	4	4	57	27	263	3	18	45	69
Minn.	-	-	-	-	1	-	12	18	155	-	-	5	7
Iowa	-	3	-	-	1	-	5	-	24	2	-	-	1
Mo.	1	3	-	2	-	-	18	-	13	-	18	34	2
N. Dak.	-	-	-	-	-	1	5	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	2	3	-	1	1	-	1	-
Nebr.	-	2	-	-	1	-	4	-	-	-	-	-	1
Kans.	-	1	17	17	1	1	10	9	70	-	-	5	58
S. ATLANTIC	2	47	-	31	280	10	284	6	176	3	9	43	101
Del.	-	-	-	-	-	-	-	-	3	-	-	-	-
Md.	-	6	-	2	1	-	17	2	15	-	8	22	1
D.C.	-	3	-	1	1	1	2	-	-	-	-	-	-
Va.	-	16	-	14	3	2	30	1	28	-	-	8	3
W. Va.	-	2	-	1	7	-	7	1	73	-	-	1	17
N.C.	-	-	-	-	3	4	52	-	7	2	1	1	4
S.C.	-	3	-	-	-	1	33	1	16	1	-	1	6
Ga.	2	8	-	-	91	1	65	-	7	-	-	3	26
Fla.	-	9	-	13	174	1	78	1	33	-	-	7	44
E.S. CENTRAL	-	1	-	6	-	3	90	1	27	1	1	35	20
Ky.	-	1	-	1	-	1	14	-	9	-	1	20	12
Tenn.	-	-	-	4	-	-	35	1	11	-	-	-	8
Ala.	-	-	-	-	-	2	36	-	4	-	-	-	-
Miss.	-	-	-	1	-	-	5	-	3	1	-	15	-
W.S. CENTRAL	3	26	2	16	426	7	171	6	117	1	4	69	83
Ark.	-	3	-	-	-	-	8	-	6	-	-	-	2
La.	-	3	-	-	-	4	29	-	3	1	-	-	9
Okla.	1	3	-	-	5	-	14	-	-	-	-	2	-
Tex.	2	17	2	16	421	3	120	6	108	-	4	67	72
MOUNTAIN	-	6	-	-	24	-	78	8	45	-	7	38	58
Mont.	-	-	-	-	-	-	4	-	3	-	-	3	3
Idaho	-	-	-	-	1	-	6	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	-	5	1
Colo.	-	4	-	-	5	-	30	-	7	-	-	2	28
N. Mex.	-	1	-	-	5	-	11	-	-	-	-	2	4
Ariz.	-	1	-	-	3	-	14	8	22	-	-	7	11
Utah	-	-	-	-	-	-	6	-	11	-	2	12	3
Nev.	-	-	-	-	10	-	3	-	2	-	5	7	6
PACIFIC	16	139	5	433	196	9	226	17	295	4	73	868	344
Wash.	1	7	5	23	1	1	24	4	47	2	-	22	46
Oreg.	-	4	-	-	1	-	45	-	-	-	-	3	37
Calif.	15	126	-	408	192	8	145	11	236	2	73	835	256
Alaska	-	-	-	-	-	-	9	-	6	-	-	1	-
Hawaii	-	2	-	2	2	-	3	2	6	-	-	7	5
Guam	U	1	U	-	6	U	1	U	1	U	U	1	1
P.R.	-	4	-	61	156	1	4	4	30	-	-	4	3
V.I.	U	-	U	-	6	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 22, 1982 and May 23, 1981 (20th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	12,512	11,559	554	9,662	40	7	138	32	110	2,263
NEW ENGLAND	233	248	14	262	-	-	11	1	1	17
Maine	1	1	1	21	-	-	-	-	-	16
N.H.	-	9	-	9	-	-	-	-	-	-
Vt.	-	13	-	6	-	-	2	-	-	-
Mass.	169	156	7	176	-	-	8	-	-	-
R.I.	12	16	-	9	-	-	-	1	1	-
Conn.	55	53	6	41	-	-	1	-	-	1
MID. ATLANTIC	1,729	1,786	72	1,581	3	1	18	-	-	49
Upstate N.Y.	173	159	3	283	3	-	2	-	-	27
N.Y. City	1,052	1,108	28	605	-	1	13	-	-	-
N.J.	216	229	22	304	-	-	3	-	-	1
Pa.	288	291	19	389	-	-	-	-	-	21
E.N. CENTRAL	683	619	86	1,494	-	-	13	4	4	252
Ohio	133	108	8	255	-	-	6	4	4	37
Ind.	83	73	17	198	-	-	-	-	-	42
Ill.	297	461	40	604	-	-	3	-	-	105
Mich.	126	139	17	358	-	-	4	-	-	1
Wis.	44	38	4	81	-	-	-	-	-	67
W.N. CENTRAL	243	213	25	308	7	-	3	-	3	507
Minn.	42	78	3	50	-	-	-	-	-	82
Iowa	11	9	-	41	1	-	1	-	-	160
Mo.	152	105	16	147	5	-	1	-	1	55
N. Dak.	4	5	-	6	-	-	-	-	-	51
S. Dak.	-	2	-	10	-	-	-	-	-	34
Nebr.	8	3	1	13	-	-	-	-	-	56
Kans.	26	11	5	41	1	-	1	-	2	69
S. ATLANTIC	3,436	3,013	103	1,917	6	2	20	19	60	366
Del.	7	7	3	21	-	-	-	-	-	-
Md.	200	237	20	239	1	-	6	2	10	19
D.C.	221	264	3	74	-	-	-	-	-	-
Va.	241	285	7	207	1	-	2	-	2	179
W. Va.	8	9	-	49	-	-	2	1	1	20
N.C.	244	230	15	315	-	-	-	9	27	13
S.C.	158	210	8	184	3	-	2	7	19	23
Ga.	724	773	24	277	-	-	-	-	1	85
Fla.	1,633	998	23	551	1	2	8	-	-	27
E.S. CENTRAL	896	763	58	882	5	-	11	3	9	273
Ky.	49	35	12	241	-	-	-	-	-	48
Tenn.	244	305	17	293	4	-	2	3	5	187
Ala.	317	198	17	260	-	-	7	-	3	38
Miss.	286	225	12	88	1	-	2	-	1	-
W.S. CENTRAL	3,146	2,791	78	1,105	12	2	9	4	30	491
Ark.	86	55	5	106	7	-	-	1	3	68
La.	685	627	12	199	1	-	-	-	-	14
Okla.	69	70	19	158	4	-	2	1	16	101
Tex.	2,306	2,039	42	642	-	2	7	2	11	308
MOUNTAIN	317	272	24	293	4	-	6	1	2	63
Mont.	1	8	6	24	-	-	-	-	-	27
Idaho	17	3	2	12	1	-	-	-	1	1
Wyo.	10	4	-	2	1	-	-	1	1	3
Colo.	91	90	-	31	-	-	2	-	-	-
N. Mex.	64	60	4	53	-	-	-	-	-	8
Ariz.	76	51	9	121	-	-	3	-	-	23
Utah	11	8	-	15	2	-	1	-	-	-
Nev.	47	48	3	34	-	-	-	-	-	1
PACIFIC	1,829	1,654	94	1,820	3	2	47	-	1	265
Wash.	53	63	6	109	1	-	2	-	-	-
Oreg.	52	37	2	68	-	-	1	-	-	-
Calif.	1,671	1,518	76	1,487	2	2	43	-	1	197
Alaska	6	5	-	10	-	-	-	-	-	68
Hawaii	47	31	10	146	-	-	1	-	-	-
Guam	1	-	U	2	-	U	-	U	-	-
P.R.	239	278	-	124	-	-	1	-	-	20
V.I.	-	4	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending May 22, 1982 (20th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	628	415	144	30	12	27	43
Boston, Mass.	174	100	44	10	7	13	13
Bridgeport, Conn.	41	22	13	3	-	3	3
Cambridge, Mass.	14	10	4	-	-	-	2
Fall River, Mass.	26	20	5	1	-	-	-
Hartford, Conn.	39	22	12	2	3	-	3
Lowell, Mass.	31	22	7	2	-	-	-
Lynn, Mass.	28	24	3	1	-	-	-
New Bedford, Mass.	31	24	6	1	-	-	1
New Haven, Conn.	38	26	9	1	1	1	1
Providence, R.I.	64	44	12	4	1	3	8
Somerville, Mass.	11	8	3	-	-	-	-
Springfield, Mass.	39	23	7	5	-	4	5
Waterbury, Conn.	36	27	8	-	-	1	2
Worcester, Mass.	56	43	11	-	-	2	5
MID. ATLANTIC	2,465	1,622	552	168	66	57	106
Albany, N.Y.	58	40	12	6	-	-	-
Allentown, Pa.	18	16	2	-	-	-	-
Buffalo, N.Y.	100	66	21	6	3	4	6
Camden, N.J.	51	32	12	2	1	4	-
Elizabeth, N.J.	25	23	-	2	-	-	4
Erie, Pa.†	45	33	10	-	2	-	3
Jersey City, N.J.	47	31	12	2	-	2	-
N.Y. City, N.Y.	1,386	909	297	118	31	31	47
Newark, N.J.	50	19	17	6	5	3	8
Paterson, N.J.	27	11	10	1	4	1	-
Philadelphia, Pa.†	178	103	51	14	8	2	11
Pittsburgh, Pa.†	66	40	22	2	2	-	3
Reading, Pa.	43	33	9	-	1	-	2
Rochester, N.Y.	136	100	26	1	3	6	9
Schenectady, N.Y.	28	20	4	2	2	-	-
Scranton, Pa.†	26	20	5	-	1	-	-
Syracuse, N.Y.	93	57	26	5	2	3	4
Trenton, N.J.	28	20	8	-	-	-	-
Utica, N.Y.	26	23	3	-	-	-	2
Yonkers, N.Y.	34	26	5	1	1	1	7
E.N. CENTRAL	2,276	1,416	530	174	91	65	67
Akron, Ohio	72	45	17	5	4	1	-
Canton, Ohio	33	24	5	1	3	-	1
Chicago, Ill.	446	270	109	43	19	5	15
Cincinnati, Ohio	115	71	25	10	1	8	9
Cleveland, Ohio	158	87	43	11	2	15	2
Columbus, Ohio	139	73	31	11	15	9	6
Dayton, Ohio	119	78	31	8	1	1	-
Detroit, Mich.	289	170	72	30	11	6	6
Evansville, Ind.	39	30	6	2	1	-	1
Fort Wayne, Ind.	83	60	15	4	3	1	7
Gary, Ind.	15	9	4	-	2	-	-
Grand Rapids, Mich.	58	45	7	3	2	1	1
Indianapolis, Ind.	211	118	57	21	10	5	3
Madison, Wis.	23	15	6	-	1	1	2
Milwaukee, Wis.	151	100	34	8	4	5	1
Peoria, Ill.	34	20	9	3	1	1	-
Rockford, Ill.	35	25	7	1	1	1	4
South Bend, Ind.	51	41	5	5	-	-	3
Toledo, Ohio	134	93	26	3	8	4	6
Youngstown, Ohio	71	42	21	5	2	1	-
W.N. CENTRAL	765	500	152	37	28	48	19
Des Moines, Iowa	60	45	11	1	-	3	-
Duluth, Minn.	44	31	8	3	1	1	1
Kansas City, Kans.	27	19	4	3	-	1	-
Kansas City, Mo.	110	59	26	8	6	11	-
Lincoln, Nebr.	38	28	8	-	1	1	1
Minneapolis, Minn.	74	44	19	4	2	5	-
Omaha, Nebr.	102	67	20	4	5	6	-
St. Louis, Mo.	177	107	36	8	11	15	12
St. Paul, Minn.	66	58	6	1	-	1	3
Wichita, Kans.	67	42	14	5	2	4	2

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,143	701	253	73	30	43	45
Atlanta, Ga.	156	100	42	7	7	-	-
Baltimore, Md.	194	108	51	21	6	8	4
Charlotte, N.C.	83	42	34	2	1	4	4
Jacksonville, Fla.	108	72	23	3	6	4	2
Miami, Fla.	81	52	18	3	3	5	2
Norfolk, Va.	58	35	11	7	-	5	8
Richmond, Va.	82	51	24	4	-	3	8
Savannah, Ga.	51	33	5	7	1	1	3
St. Petersburg, Fla.	91	71	17	1	-	2	4
Tampa, Fla.	66	38	23	4	-	1	6
Washington, D.C.	139	77	32	13	6	10	1
Wilmington, Del.	34	22	9	1	2	-	3
E.S. CENTRAL	731	415	215	47	24	30	37
Birmingham, Ala.	124	64	46	8	3	3	3
Chattanooga, Tenn.	43	32	7	2	-	2	5
Knoxville, Tenn.	55	40	9	1	3	2	-
Louisville, Ky.	95	56	29	4	4	2	3
Memphis, Tenn.	182	91	61	13	5	12	11
Mobile, Ala.	69	35	19	8	4	3	6
Montgomery, Ala.	32	15	10	2	2	3	1
Nashville, Tenn.	131	82	34	9	3	3	8
W.S. CENTRAL	1,224	694	296	106	64	64	52
Austin, Tex.	57	41	8	5	1	2	4
Baton Rouge, La.	20	13	4	1	-	2	1
Corpus Christi, Tex.	44	27	10	4	2	1	1
Dallas, Tex.	180	105	45	19	5	6	4
El Paso, Tex.	53	24	14	3	7	5	8
Fort Worth, Tex.	96	65	19	5	2	5	7
Houston, Tex.	274	121	76	39	23	15	2
Little Rock, Ark.	66	39	19	3	3	2	3
New Orleans, La.	140	75	38	8	5	14	1
San Antonio, Tex.	163	106	26	15	10	6	13
Shreveport, La.	53	28	19	1	3	2	4
Tulsa, Okla.	78	50	18	3	3	4	4
MOUNTAIN	652	382	169	47	33	21	32
Albuquerque, N. Mex.	95	52	27	11	4	1	9
Colo. Springs, Colo.	31	19	9	-	2	1	3
Denver, Colo.	136	87	32	11	1	5	4
Las Vegas, Nev.	55	32	15	4	4	-	1
Ogden, Utah	23	14	5	1	3	-	5
Phoenix, Ariz.	148	90	36	8	9	5	3
Pueblo, Colo.	28	12	10	5	1	-	3
Salt Lake City, Utah	48	23	9	4	4	8	1
Tucson, Ariz.	88	53	26	3	5	1	3
PACIFIC	1,785	1,152	391	123	67	51	76
Berkeley, Calif.	15	10	3	1	1	-	1
Fresno, Calif.	80	47	19	7	5	2	2
Glendale, Calif.	26	23	2	-	1	-	1
Honolulu, Hawaii	61	35	16	7	-	3	2
Long Beach, Calif.	96	66	21	4	3	2	4
Los Angeles, Calif.	533	350	106	38	25	13	16
Oakland, Calif.	59	34	14	6	3	2	5
Pasadena, Calif.	22	15	5	1	1	-	2
Portland, Oreg.	116	80	19	6	3	8	7
Sacramento, Calif.	68	29	25	8	3	3	-
San Diego, Calif.	116	82	20	8	2	4	12
San Francisco, Calif.	162	99	41	14	5	3	4
San Jose, Calif.	181	112	44	16	5	4	14
Seattle, Wash.	140	89	36	6	6	3	2
Spokane, Wash.	65	46	11	1	4	3	1
Tacoma, Wash.	45	35	9	-	-	1	3
TOTAL	11,669††	7,297	2,742	805	415	406	477

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

Cocaine Use – Continued

Editorial Note: Cocaine is an alkaloid derived from the leaves of the coca shrub (*Erythroxylon Coca*). The U.S. Pharmacopeia compound consists of white, orderless crystals or crystalline powder having a purity of 100% (± 1). Its current medical application is limited to topical use for anesthesia of the ear, nose, and throat, and for bronchoscopy.

Illegally distributed cocaine is often adulterated with a variety of substances including procaine, lidocaine, and amphetamines, as well as sugars, such as mannitol and lactose. The dangers involved in cocaine use include consequences of both acute and chronic use. Acute toxicity, similar to that caused by amphetamines, is characterized by nervousness, dizziness, blurred vision, and tremors, and may lead to convulsions, cardiac arrhythmias, and respiratory arrest. Chronic use is associated with ulceration and perforation of the nasal septum, weight loss, insomnia, anxiety, paranoia, formication, and hallucination.

The increased prevalence of cocaine use and of the health consequences associated with that use may be based on increasing availability and changes in the patterns of use. The U.S. Department of Justice estimated that between 40 and 48 metric tons of cocaine hydrochloride were imported into the United States in 1980, an increase of more than 50% over the previous year (7). In addition, changes in the route of administration of the drug from inhaling or "snorting" to freebasing (processing the cocaine into a pure form by removing the hydrochloride base and then smoking the freebase) and to intravenous use may be causing adverse health consequences.

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TABLE 4. Cocaine users admitted to federally funded drug-abuse programs, 1977-1980, United States

Route of administration	1977		1980	
	No.	%	No.	%
Inhalation	2,333	69	6,906	61
Intravenous	812	24	3,510	31
Oral	169	5	453	4
Smoking	34	1	340	3
Intramuscular	34	1	113	1
Total	3,382	100	11,322	100

Epidemiologic Notes and Reports

Inadvertent BCG Administration — Tennessee, Michigan

In October 1981, 49 employees of a Tennessee hospital, scheduled to receive tuberculin skin tests as part of their institution's tuberculosis-surveillance program, were inadvertently given Bacillus of Calmette and Guérin (BCG) instead of purified protein derivative of tuberculin (PPD). Of those vaccinated, 47 subsequently developed the expected local reaction to BCG at the site of vaccination on the forearm; 1 employee had no local reaction, and 1 experienced a local reaction and axillary lymphadenopathy. All these reactions resolved spontaneously. Approximately 10 weeks after receiving BCG, 20 of the 49 employees returned voluntarily for testing with 5 tuberculin units (TU) of PPD; 18 of the 20 (90%) developed "significant" tuberculin reactions (≥10 mm in diameter).

During the same month, BCG was also given instead of PPD to 63 residents and 37 employees of a Michigan nursing home. The 3 employees who either were known tuberculin reactors or had a past history of tuberculosis developed large, erythematous reactions at the inoculation site within 2 days of receiving the BCG; 2 of the 3 also noted low-grade fever that lasted for several days. Five days after the BCG was given, the vaccinated residents and other vaccinated staff were tuberculin tested. Six employees whose tuberculin tests had been negative in the past had "significant" reactions. Of the 63 residents, 3 had "significant" reactions; 2 of these 3 had a record of having had negative tuberculin tests in the past. Several weeks later, 3 patients and 1 staff member were given isoniazid (INH) for a short period because of slowly healing ulcers at the site of inoculation. The medication was discontinued after the lesions were examined by a consultant who found them to be typical lesions developed by persons given BCG.

Reported by HR Anderson, MD, Div of Tuberculosis Control, RH Hutcheson, Jr, MD, State Epidemiologist, Tennessee State Dept of Health; W Thar, MD, MPH, Mid-Michigan District Health Dept, NB Keon, Div of Disease Surveillance, NS Hayner, MD, MPH, State Epidemiologist, Michigan Dept of Health; Tuberculosis Control Div, Center for Prevention Svcs, CDC.

Editorial Note: In the United States, tuberculosis-control programs for employees, patients, or residents in health-care facilities should be based on measures to prevent the transmission of tuberculosis and on a program of tuberculin testing of employees at periodic intervals to detect any recently acquired infections (*1-3*).

In the episodes described, 0.1 ml of BCG vaccine was inadvertently given instead of the same dose of PPD. Ulceration at the site of BCG administration is common and usually heals spontaneously after several weeks. Axillary lymphadenopathy may also occur. Resolution is usually spontaneous, but occasionally treatment is required. Most strains of BCG are sensitive to antituberculosis drugs. Disseminated BCG infection is uncommon, and usually occurs only among immunologically abnormal hosts.

Inservice education programs can help maintain an awareness of tuberculosis among health-care personnel, and can help clarify the distinction between BCG (a tuberculosis vaccine) and PPD (a tuberculin skin-test antigen). These episodes, along with previous instances in which diphtheria-pertussis-tetanus (DPT) and PPD solutions have been inadvertently substituted for one another (*4*), also reemphasize the need for personnel to read labels on drugs and biologics carefully before such materials are used.

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BCG Administration – Continued

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Current Trends

Licensure of Yomesan[*]

Miles Pharmaceuticals has been licensed by the Food and Drug Administration (FDA) to manufacture and distribute Niclocide (Yomesan)[†] in the United States for treatment for humans with cestodiasis (tapeworm infections). Drug requests should be directed to local Miles representatives or to: Miles Pharmaceuticals, 400 Morgan Lane, West Haven, CT 06516. Telephone: 800-243-4153 (toll free) or 203-934-9221.

The Parasitic Disease Drug Service (PDDS) of CDC will continue to distribute 13 other drugs to physicians requesting them (Table 5). After the requesting physician provides information about the infection, specific laboratory data, and limited patient data (name, age, sex, and weight), CDC will release these drugs to all licensed physicians in the United States who agree to register as Clinical Investigators by completing FDA Form FD-1573. Included in each shipment is a packet containing 1) a drug protocol outlining indications/contraindications, dosages, routes and frequency of administration, expected adverse reactions, and toxicity, 2) a patient consent form (available in English, Spanish, Cambodian, Lao, Muong [Hmoob],

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[*] Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

[†] Formerly distributed in the United States by the Parasitic Disease Drug Service (PDDS) as niclosamide (Yomesan).

TABLE 5. Drugs carried by the Parasistic Disease Service

Investigational new drugs	**Indications**
Bayer 205 (Suramin)	African trypanosomiasis, onchocerciasis
Bayer 2502 (Lampit)	American trypanosomiasis
Bithionol, N.F.	Paragonimiasis, *Fasciola hepatica*
Dehydroemetine	Amebiasis
Diloxanide furoate (Furamide)	Amebiasis
Melarsoprol (Mel B)	African trypanosomiasis
Metrifonate (Bilarcil)	Schistosomiasis
Niridazole (Ambilhar)	Dracunculiasis, schistosomiasis
Pentamidine isethionate (Lomidine)	Pneumocystosis, African trypanosomiasis
Sodium antimony dimercaptosuccinate (Astiban)	Schistosomiasis
Sodium antimony gluconate (Pentostam)	Leishmaniasis
Commercially licensed, but difficult-to-obtain drugs	
Chloroquine (parenteral)	Malaria
Quinine (parenteral)	Malaria

Yomesan – Continued

and Vietnamese); and 3) a 1-page patient report form that asks the physician to report all side effects of therapy and record the drug's effectiveness (cure/noncure), as demonstrated by the appropriate laboratory parameters.

Requests for drugs from PDDS should be directed to: Centers for Disease Control, Parasitic Disease Drug Service, 1600 Clifton Road, Bldg. 6, Room 161, Atlanta, GA 30333. Telephone: (Day) 404-329-3670, 8:00 AM to 4:30 PM, Monday through Friday; (night, weekend, or holiday) 404-329-2888, For Emergency Calls *Only*.

Reported by Parasitic Diseases Div, Center for Infectious Diseases, CDC.

The Morbidity and Mortality Weekly Report, circulation 108,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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CENTERS FOR DISEASE CONTROL

MMWR

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Epidemiologic Notes and Reports

Diffuse, Undifferentiated Non-Hodgkins Lymphoma among Homosexual Males — United States

A recent outbreak of Kaposi's sarcoma, *Pneumocystis carinii* pneumonia, and other opportunistic infections (KSOI) involving homosexual males and associated with an acquired cellular immunodeficiency syndrome has been described (*1,2*). While the pathogenesis of these disorders among homosexual males in San Francisco was being studied, 4 cases of diffuse, undifferentiated non-Hodgkins lymphoma (DUNHL) were diagnosed between March 1981 and January 1982. Because of the rarity of this malignancy and the potential relationship of these cases to the KSOI syndrome, they are reported here.

Patient 1: A 28-year-old hospital clerk complained of back and shoulder pain starting in early March 1981. Within a few days he had swelling of the right eye and an unsteady gait, and he was hospitalized on March 21. "Shotty" peripheral lymphadenopathy was present. A biopsy of an orbital mass and an enlarged cervical lymph node disclosed DUNHL. A myelogram revealed a T4-T6 block by an extradural mass. Radiation and chemotherapy led to complete remission. In September 1981, another tumor in the spinal cord was treated with radiation. The ensuing remission was temporary, and the patient died with disseminated DUNHL on January 15, 1982.

Patient 2: A 33-year-old nurse developed a tumor in his left lower jaw in October 1981. Penicillin was given for a suspected abscess, but the mass enlarged. A biopsy on November 24 disclosed DUNHL. Tumor cells contained surface IgM, kappa type, indicating a B-cell tumor. The tumor involved a left axillary lymph node, the retroperitoneum, the bone marrow, and the meninges. Generalized "reactive" lymphadenopathy and mild splenomegaly were present. Systemic and intrathecal chemotherapy led to temporary tumor regression; the patient relapsed and died in March 1982.

Patient 3: A 35-year-old janitor developed an enlarged cervical lymph node in October 1981. A dental extraction was performed for a suspected abscess, but lymphadenopathy persisted. A biopsy on December 12 revealed DUNHL. Tumor cells contained surface IgM, kappa type. Tumor was detected in the mediastinum, retroperitoneum, both kidneys, bone marrow, and meninges. Moderate generalized lymphadenopathy and splenomegaly were present. Systemic and intrathecal chemotherapy led to rapid tumor regression; however, this patient has recently relapsed.

Patient 4: A 24-year-old clerk developed backache and fatigue in November 1981. On January 21, 1982, an exploratory laparotomy showed DUNHL with extensive retroperitoneal involvement. Tumor cells contained surface IgM, kappa type. Combination chemotherapy has led to complete remission.

All these patients were homosexual males living in San Francisco. They had no known contact with each other, had no known sexual partners in common, and had no known contact

HE 20.7009:

Non-Hodgkins Lymphoma – Continued

with patients with Kaposi's sarcoma (KS). Each gave a history of a life style that included use of such drugs as nitrite inhalants, amphetamines, and marijuana. Medical histories indicated that all 4 patients had had 1 or more of such infections as hepatitis B, anal warts, gonorrhea, and syphilis. All patients had generalized lymphadenopathy, and 3 had splenomegaly of uncertain duration. Detailed virology and immunology studies are in progress.

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Editorial Note: Since July 1981, CDC has received reports of 162 cases of Kaposi's sarcoma among young homosexual males; the above report documents the possible appearance of a second unusual malignancy among this group of young males—i.e., DUNHL, a B-cell lymphoma (*3*).

The difficulty in distinguishing DUNHL histologically from Burkitt's lymphoma (BL) (*3*), a tumor often associated with Epstein-Barr virus, and the lack of consensus on the classification of non-Hodgkin's lymphoma (NHL) (*4*) make the precise determination of incidence difficult. About 0.7%-2.4% of all cases of NHL are DUNHL (*4,5*)—for a crude incidence rate of 0.06-0.21/100,000 population/year. No cases of DUNHL and only 1 case of BL were reported in 1977-1980 among 20-39 year olds to the Surveillance Epidemiology and End Results Cancer Registry in the San Francisco-Oakland-Standard Metropolitan Statistical Area, emphasizing the unusual occurrence of 4 cases within 10 months in the San Francisco homosexual male population. CDC has also recently received a report from Chicago of another case of DUNHL affecting a young homosexual male.

Underlying immune deficiency appears to be the common denominator for the development of the opportunistic infections and tumors associated with the KSOI syndrome (*6-8*). A similar syndrome, with an increased risk for NHL but a different time course and spectrum of opportunistic diseases, appears among renal allograft recipients (*4,9*). Lymphoreticular tumors also occur much more frequently among patients with primary immunodeficiency disorders (*4*). The cause of the acquired cellular immunodeficiency among homosexual males is being studied.

This report of DUNHL suggests that more than one kind of tumor may occur in association with the KSOI syndrome; assessment of these patients' immunologic findings will help to document the relationship between such tumors and the KSOI syndrome. The full range of potential outcomes (i.e., opportunistic tumors and infections) is probably only now being elucidated. There have also been recent case reports of other malignancies affecting the homosexual population, including carcinoma of the anal rectum (*10*) and squamous cell carcinoma of the oral cavity (*11,12*). The excess of carcinoma of the anus and anal rectum appears to antedate the onset of KSOI syndrome (*13*). The relationship between these malignancies and the KSOI syndrome is uncertain.

Many homosexual males with persistent, unexplained, generalized lymphadenopathy and biopsies reportedly demonstrating only reactive hyperplasia have also been reported to CDC and are under active investigation (*14*). Homosexual males with clinical findings similar to DUNHL or lymphadenopathic KS (*15*) should be carefully evaluated and followed.

Non-Hodgkins Lymphoma – Continued

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Recommendation of the Immunization Practices Advisory Committee (ACIP)

Supplementary Statement on Pre-Exposure Rabies Prophylaxis by the Intradermal Route

These revised ACIP pre-exposure rabies prophylaxis recommendations represent an update of the previous recommendations (MMWR 1981;30:535-6) to include current information about vaccine use and optional dose regimens.

The Immunization Practices Advisory Committee (ACIP) has examined data on the use of intradermal (ID) vaccination for pre-exposure rabies prophylaxis with Merieux Institute's human diploid cell strain rabies vaccine (HDCV). Over 1,500 persons have received intradermal HDCV as pre-exposure vaccination; all those who received a 3-dose regimen developed adequate antibody. It appears that, with this vaccine, the 0.1-ml intradermal (ID) regimen is

ACIP Recommendation – Rabies

an acceptable alternative to the currently approved 1.0-ml intramuscular (IM) regimen for pre-exposure prophylaxis (*1,2*). Although the accepted pre-exposure vaccination regimen is 3 doses of vaccine, 1.0 ml IM each, given on days 0, 7, and 21 or 28, apparently the 0.1-ml ID regimen will be an acceptable alternative after Merieux Institute produces a product with appropriate packaging and labelling changes. Intradermal vaccination should be administered in the lateral aspect of the upper arm over the deltoid. Booster vaccination (either 1.0 ml IM or 0.1 ml ID) should still be given every 2 years to persons such as veterinarians, animal handlers, and laboratory diagnosticians who are at continuing risk. Laboratory workers in rabies biologics production or in rabies research laboratories who might be at high risk of high-dose inapparent exposure should still receive a booster dose every 6 months or be tested for rabies antibody and vaccinated when antibody level falls below 16 as measured with the rapid fluorescent focus inhibition (RFFI) test.

Except as noted above or in the case of persons suspected of being immunocompromised, the ACIP suggests that routine serologic testing to confirm a satisfactory antibody response is not necessary regardless of whether the recommended IM or ID regimens are used (*3*). Reaction rates following ID vaccination have been comparable with those following IM vaccination except that a slight increase in transient local reactions has been observed following ID vaccination, especially when the vaccine is given in the forearm rather than in the lateral aspect of the upper arm.

(Continued on page 285)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE			21st WEEK ENDING			CUMULATIVE, FIRST 21 WEEKS		
			May 29 1982	May 30 1981	MEDIAN 1977-1981	May 29 1982	May 30 1981	MEDIAN 1977-1981
Aseptic meningitis			43	76	55	1,534	1,427	1,023
Brucellosis			6	2	3	49	51	70
Encephalitis:	Primary (arthropod-borne & unspec.)		7	9	9	292	277	244
	Post-infectious		2	4	5	28	41	81
Gonorrhea:	Civilian		14,248	17,257	18,426	359,250	391,559	378,065
	Military		219	301	451	10,464	11,431	10,952
Hepatitis:	Type A		293	479	494	8,850	10,211	11,474
	Type B		289	352	286	8,103	7,868	6,515
	Non A, Non B		30	N	N	826	N	N
	Unspecified		128	208	204	3,592	4,431	4,071
Legionellosis			15	N	N	151	N	N
Leprosy			1	5	5	75	88	68
Malaria			16	28	20	321	520	212
Measles (rubeola)			37	171	657	628	1,701	9,042
Meningococcal infections:		Total	50	62	57	1,447	1,866	1,339
		Civilian	49	61	57	1,442	1,860	1,325
		Military	1	1	1	5	6	10
Mumps			193	170	563	3,168	2,242	8,369
Pertussis			15	23	23	422	413	439
Rubella (German measles)			29	70	647	1,322	1,236	8,173
Syphilis (Primary & Secondary):		Civilian	579	578	424	13,089	12,137	9,739
		Military	8	13	9	163	149	128
Tuberculosis			451	505	566	10,113	10,358	10,836
Tularemia			3	6	5	43	60	46
Typhoid fever			2	11	11	140	185	160
Typhus fever, tick-borne (RMSF)			25	59	33	135	216	144
Rabies, animal			98	141	122	2,397	3,005	1,885

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Pa. 1)	28	Paralytic	1
Cholera	–	Psittacosis (Tex. 1)	40
Congenital rubella syndrome	5	Rabies, human	–
Diphtheria	–	Tetanus	27
Leptospirosis (Hawaii 2)	26	Trichinosis (N.J. 1, Pa. 1)	48
Plague (Ariz. 1)	4	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	8

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 29, 1982 and May 30, 1981 (21st week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	43	49	292	28	359,250	391,559	293	209	30	128	15	75
NEW ENGLAND	1	3	14	4	8,916	9,529	8	17	1	12	4	1
Maine	1	-	-	-	399	483	2	-	-	-	-	-
N.H.	-	-	-	-	251	338	-	-	-	-	1	-
Vt.	-	-	-	-	188	167	2	-	-	-	-	-
Mass.	-	-	4	-	4,267	3,865	4	4	-	10	-	-
R.I.	-	-	-	-	596	476	-	4	-	-	-	-
Conn.	-	3	10	4	3,275	4,200	-	9	1	2	3	1
MID. ATLANTIC	7	-	43	6	44,859	46,227	31	68	2	15	8	4
Upstate N.Y.	2	-	16	1	7,291	7,355	13	13	1	3	-	1
N.Y. City	1	-	9	-	18,838	19,354	10	29	-	2	1	1
N.J.	1	-	10	-	8,102	8,898	8	26	1	10	-	1
Pa.	3	-	8	5	10,628	10,620	-	-	-	-	7	1
E.N. CENTRAL	7	-	59	6	49,384	61,423	48	32	2	12	2	1
Ohio	1	-	17	4	14,924	21,058	14	10	1	6	2	-
Ind.	4	-	15	2	6,116	5,653	16	4	1	2	-	-
Ill.	-	-	-	-	10,902	17,022	2	1	-	1	-	1
Mich.	2	-	25	-	12,532	12,553	16	17	-	3	-	-
Wis.	-	-	2	-	4,910	5,137	-	-	-	-	-	-
W.N. CENTRAL	2	4	15	3	17,369	18,147	7	17	-	4	-	-
Minn.	-	-	1	1	2,605	2,903	4	4	-	1	-	-
Iowa	-	1	8	1	1,917	1,849	1	2	-	-	-	-
Mo.	2	1	4	-	7,948	8,217	2	4	-	1	-	-
N. Dak.	-	-	-	-	242	249	-	-	-	-	-	-
S. Dak.	-	-	-	1	498	525	-	1	-	-	-	-
Nebr.	-	-	1	-	1,047	1,445	-	6	-	2	-	-
Kans.	-	2	1	-	3,112	2,959	-	-	-	-	-	-
S. ATLANTIC	14	12	40	5	87,472	96,185	26	74	11	22	-	5
Del.	-	-	-	-	1,484	1,426	1	2	-	-	-	-
Md.	1	-	10	-	12,019	10,644	-	14	-	1	-	2
D.C.	-	-	-	-	5,089	6,051	1	3	-	-	-	-
Va.	2	3	10	-	8,186	8,640	6	21	4	8	-	1
W. Va.	U	-	-	-	1,049	1,455	U	U	U	U	U	-
N.C.	4	-	4	1	15,392	14,949	2	3	-	5	-	-
S.C.	4	2	-	-	9,048	9,167	5	7	-	-	-	-
Ga.	-	1	-	-	9,483	19,239	8	17	2	4	-	-
Fla.	3	6	16	4	25,722	24,614	3	7	5	4	-	2
E.S. CENTRAL	4	6	16	1	31,179	31,657	28	21	1	2	-	-
Ky.	1	-	-	-	4,200	4,095	5	-	-	-	-	-
Tenn.	-	4	9	-	12,101	12,057	8	10	-	2	-	-
Ala.	1	1	5	1	9,290	9,588	6	8	1	-	-	-
Miss.	2	1	2	-	5,588	5,917	9	3	-	-	-	-
W.S. CENTRAL	5	14	32	-	52,556	51,893	106	30	-	53	-	8
Ark.	-	3	1	-	4,299	3,642	1	1	-	6	-	-
La.	-	2	4	-	9,553	8,389	19	9	-	7	-	-
Okla.	1	3	9	-	5,624	5,424	17	10	-	3	-	-
Tex.	4	6	18	-	33,080	34,438	69	10	-	37	-	8
MOUNTAIN	1	-	15	1	13,209	15,409	21	15	6	7	1	2
Mont.	-	-	-	-	538	535	1	-	-	-	-	-
Idaho	-	-	-	-	619	673	-	-	-	-	-	1
Wyo.	-	-	-	-	371	344	1	-	-	-	-	-
Colo.	-	-	5	1	3,457	4,134	7	3	-	1	-	-
N. Mex.	1	-	-	-	1,654	1,685	1	-	1	-	-	-
Ariz.	-	-	6	-	3,611	4,742	7	6	3	4	-	-
Utah	-	-	-	-	604	720	2	3	1	1	-	1
Nev.	-	-	4	-	2,355	[illegible],576	2	3	1	1	1	-
PACIFIC	2	10	58	2	54,306	61,089	18	15	7	1	-	54
Wash.	-	-	5	-	4,717	5,220	13	8	6	1	-	6
Oreg.	-	-	1	-	3,176	3,952	3	6	1	-	-	-
Calif.	U	9	48	2	44,046	49,207	U	U	U	U	U	28
Alaska	-	1	3	-	1,384	1,545	1	-	-	-	-	1
Hawaii	2	-	1	-	983	1,165	1	1	-	-	-	19
Guam	U	-	-	-	33	56	U	U	U	U	U	-
P.R.	1	-	1	-	1,154	1,337	1	3	-	4	-	-
V.I.	U	-	-	-	60	57	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	165	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 29, 1982 and May 30, 1981 (21st week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	16	321	37	628	1,701	50	1,447	193	3,168	15	29	1,322	1,236
NEW ENGLAND	1	21	-	7	71	2	82	2	141	3	-	10	97
Maine	-	-	-	-	5	-	2	-	32	2	-	-	32
N.H.	-	-	-	1	6	-	11	-	12	-	-	8	40
Vt.	-	-	-	2	2	-	4	-	4	-	-	-	-
Mass.	1	16	-	2	51	-	22	1	70	1	-	-	15
R.I.	-	1	-	-	-	-	11	1	11	-	-	1	-
Conn.	-	4	-	2	7	2	32	-	12	-	-	1	10
MID. ATLANTIC	3	38	31	79	479	6	246	9	210	3	4	73	141
Upstate N.Y.	1	9	30	55	181	1	61	-	36	-	1	34	58
N.Y. City	-	14	-	18	44	-	47	1	33	1	2	26	37
N.J.	1	10	-	2	45	1	53	-	30	2	1	13	42
Pa.	1	5	1	4	209	4	85	8	111	-	-	-	4
E.N. CENTRAL	1	23	1	32	70	8	178	124	1,832	4	6	121	281
Ohio	-	6	-	-	15	3	71	99	1,363	1	-	-	-
Ind.	-	1	1	2	7	2	15	3	28	-	1	19	97
Ill.	-	3	-	15	20	1	45	13	123	2	4	46	63
Mich.	1	11	-	15	27	2	36	9	247	1	1	39	31
Wis.	-	2	-	-	1	-	11	-	71	-	-	17	90
W.N. CENTRAL	-	9	-	19	6	3	60	47	310	1	7	52	71
Minn.	-	-	-	-	2	-	12	43	198	1	-	5	7
Iowa	-	3	-	-	1	-	5	3	27	-	-	-	3
Mo.	-	3	-	2	1	2	20	-	13	-	4	38	2
N. Dak.	-	-	-	-	-	-	5	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	3	-	1	-	-	1	-
Nebr.	-	2	-	-	1	-	4	-	-	-	-	-	1
Kans.	-	1	-	17	1	1	11	1	71	-	3	8	58
S. ATLANTIC	4	51	-	31	287	10	295	5	181	1	1	45	103
Del.	-	-	-	-	-	-	-	2	5	-	-	1	-
Md.	1	7	-	2	1	-	17	-	15	-	-	22	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	3	19	-	14	3	2	32	1	29	-	-	8	3
W. Va.	U	2	U	1	7	U	7	U	73	U	U	1	17
N.C.	-	-	-	-	3	3	55	-	7	-	-	1	4
S.C.	-	3	-	-	-	3	36	1	11	1	-	1	7
Ga.	-	8	-	-	94	-	65	1	8	-	1	4	27
Fla.	-	9	-	13	178	2	81	-	33	-	-	7	44
E.S. CENTRAL	4	5	-	6	-	6	96	-	27	2	1	36	20
Ky.	3	4	-	1	-	-	14	-	9	1	-	20	12
Tenn.	-	-	-	4	-	4	39	-	11	-	-	-	8
Ala.	-	-	-	-	-	2	38	-	4	-	-	-	-
Miss.	1	1	-	1	-	-	5	-	3	1	1	16	-
W.S. CENTRAL	2	28	4	20	548	11	182	5	122	-	5	74	89
Ark.	1	4	-	-	-	3	11	-	6	-	-	-	2
La.	-	3	-	-	-	5	34	-	3	-	-	-	9
Okla.	-	3	-	-	5	-	14	-	-	-	-	2	-
Tex.	1	18	4	20	543	3	123	5	113	-	5	72	78
MOUNTAIN	-	6	-	-	24	1	79	-	49	-	4	42	59
Mont.	-	-	-	-	-	-	4	-	3	-	-	3	3
Idaho	-	-	-	-	1	-	6	-	2	-	-	-	2
Wyo.	-	-	-	-	-	-	4	-	2	-	-	5	1
Colo.	-	4	-	-	5	-	30	-	7	-	2	4	29
N. Mex.	-	1	-	-	5	-	11	-	-	-	-	2	4
Ariz.	-	1	-	-	3	-	14	-	22	-	-	7	11
Utah	-	-	-	-	-	1	7	-	11	-	-	12	3
Nev.	-	-	-	-	10	-	3	-	2	-	2	9	6
PACIFIC	1	140	1	434	216	3	229	1	296	1	1	869	375
Wash.	-	7	1	24	1	-	24	1	48	1	1	23	47
Oreg.	1	5	-	-	3	3	48	-	-	-	-	3	37
Calif.	U	126	U	408	210	U	145	U	236	U	U	835	286
Alaska	-	-	-	-	-	-	9	-	6	-	-	1	-
Hawaii	-	2	-	2	2	-	3	-	6	-	-	7	5
Guam	U	1	U	-	6	U	1	U	1	U	U	1	1
P.R.	-	4	-	61	174	-	4	5	35	-	-	4	3
V.I.	U	-	U	-	8	U	-	U	-	U	U	-	-
Pac. Trust Terr.	U	-	U	-	-	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 29, 1982 and May 30, 1981 (21st week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	13,069	12,137	451	10,113	43	2	140	25	135	2,397
NEW ENGLAND	239	259	16	278	-	-	11	-	1	19
Maine	1	1	1	22	-	-	-	-	-	18
N.H.	-	11	1	10	-	-	-	-	-	-
Vt.	-	13	-	6	-	-	2	-	-	-
Mass.	168	165	11	187	-	-	8	-	-	-
R.I.	12	16	-	9	-	-	-	-	1	-
Conn.	58	53	3	44	-	-	1	-	-	1
MID. ATLANTIC	1,799	1,849	130	1,711	3	2	20	-	-	54
Upstate N.Y.	185	158	22	305	3	-	2	-	-	30
N.Y. City	1,089	1,146	32	637	-	-	13	-	-	-
N.J.	229	236	20	324	-	-	3	-	-	1
Pa.	296	309	56	445	-	2	2	-	-	23
E.N. CENTRAL	713	838	68	1,561	-	-	13	4	8	266
Ohio	133	108	8	263	-	-	6	3	7	43
Ind.	91	77	3	199	-	-	-	-	-	63
Ill.	317	471	18	622	-	-	3	1	1	112
Mich.	127	141	36	393	-	-	4	-	-	1
Wis.	45	41	3	84	-	-	-	-	-	67
W.N. CENTRAL	259	232	9	317	8	-	3	-	3	528
Minn.	46	83	2	52	-	-	-	-	-	82
Iowa	14	12	2	43	1	-	1	-	-	166
Mo.	160	113	2	149	5	-	1	-	1	59
N. Dak.	4	5	-	6	-	-	-	-	-	52
S. Dak.	-	2	-	10	-	-	-	-	-	34
Nebr.	8	3	1	14	-	-	-	-	-	63
Kans.	27	14	2	43	2	-	1	-	2	72
S. ATLANTIC	3,632	3,141	108	2,020	7	-	20	14	74	373
Del.	7	7	-	21	-	-	-	-	-	-
Md.	208	251	14	253	1	-	6	1	11	19
D.C.	225	267	7	81	-	-	-	-	-	-
Va.	251	291	13	220	1	-	2	6	8	180
W. Va.	8	9	U	49	-	U	2	U	1	20
N.C.	254	241	17	329	-	-	-	5	32	16
S.C.	173	218	15	199	4	-	2	-	19	23
Ga.	757	797	17	294	-	-	-	2	3	88
Fla.	1,749	1,060	25	574	1	-	8	-	-	27
E.S. CENTRAL	933	779	39	921	6	-	11	1	10	301
Ky.	49	39	12	253	-	-	-	-	-	52
Tenn.	257	307	16	309	4	-	2	-	5	205
Ala.	327	198	11	271	-	-	7	-	3	44
Miss.	300	235	-	88	2	-	2	1	2	-
W.S. CENTRAL	3,333	2,951	59	1,164	12	-	9	6	36	518
Ark.	89	55	4	110	7	-	-	2	5	70
La.	724	671	20	219	1	-	-	-	-	14
Okla.	73	74	-	158	4	-	2	2	18	104
Tex.	2,447	2,151	35	677	-	-	7	2	13	330
MOUNTAIN	345	304	11	304	4	-	6	-	2	73
Mont.	1	8	-	24	-	-	-	-	-	33
Idaho	17	4	-	13	1	-	-	-	1	1
Wyo.	10	4	-	2	1	-	-	-	1	3
Colo.	97	96	4	35	-	-	2	-	-	3
N. Mex.	76	67	3	56	-	-	-	-	-	8
Ariz.	79	69	4	125	-	-	3	-	-	24
Utah	11	8	-	15	2	-	1	-	-	-
Nev.	54	48	-	34	-	-	-	-	-	1
PACIFIC	1,836	1,784	11	1,837	3	-	47	-	1	265
Wash.	53	66	3	112	1	-	2	-	-	-
Oreg.	54	38	3	69	-	-	1	-	-	-
Calif.	1,671	1,643	U	1,487	2	U	43	U	1	197
Alaska	7	6	-	24	-	-	-	-	-	68
Hawaii	51	31	5	145	-	-	1	-	-	-
Guam	1	-	U	2	-	U	-	U	-	-
P.R.	247	288	2	129	-	-	1	-	-	20
V.I.	-	4	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	J	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending May 29, 1982 (21st week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	676	460	147	37	16	16	38
Boston, Mass.	194	115	58	14	3	4	16
Bridgeport, Conn.	32	24	4	2	-	2	1
Cambridge, Mass.	24	18	5	-	-	1	7
Fall River, Mass.	26	18	7	1	-	-	-
Hartford, Conn.	72	51	12	4	4	1	-
Lowell, Mass.	27	19	7	1	-	-	-
Lynn, Mass.	20	16	4	-	-	-	-
New Bedford, Mass.	27	25	1	-	1	-	1
New Haven, Conn.	55	38	9	4	2	2	1
Providence, R.I.	64	42	15	4	1	2	5
Somerville, Mass.	5	4	1	-	-	-	1
Springfield, Mass.	32	24	3	2	2	1	5
Waterbury, Conn.	31	24	6	1	-	-	1
Worcester, Mass.	67	42	15	4	3	3	-
MID. ATLANTIC	2,366	1,556	532	142	63	69	78
Albany, N.Y.	46	23	15	5	1	2	-
Allentown, Pa.	16	13	3	-	-	-	2
Buffalo, N.Y.	50	33	13	2	1	1	1
Camden, N.J.	46	25	15	4	1	1	1
Elizabeth, N.J.	37	27	9	-	1	-	2
Erie, Pa.†	37	23	11	-	1	2	2
Jersey City, N.J.	42	34	8	-	-	-	1
N.Y. City, N.Y.	1,315	865	289	93	36	32	39
Newark, N.J.	60	30	15	4	-	8	4
Paterson, N.J. §	30	24	-	2	1	2	2
Philadelphia, Pa.†	200	126	53	12	4	5	9
Pittsburgh, Pa.†	93	58	22	4	6	3	-
Reading, Pa.	40	31	4	1	2	2	1
Rochester, N.Y.	140	99	24	9	3	5	8
Schenectady, N.Y.	18	11	6	-	1	-	-
Scranton, Pa.†	26	13	9	2	1	1	3
Syracuse, N.Y.	80	52	18	1	4	5	2
Trenton, N.J.	22	16	5	1	-	-	-
Utica, N.Y.	37	28	8	1	-	-	-
Yonkers, N.Y.	31	25	5	1	-	-	1
E.N. CENTRAL	2,246	1,426	501	141	72	104	87
Akron, Ohio	74	52	12	3	3	4	3
Canton, Ohio	36	23	10	2	-	1	1
Chicago, Ill.	543	314	130	37	26	36	10
Cincinnati, Ohio	137	90	31	5	6	5	15
Cleveland, Ohio	173	103	49	9	7	8	1
Columbus, Ohio	135	80	34	12	5	4	4
Dayton, Ohio	99	64	25	6	1	3	2
Detroit, Mich.	262	160	52	28	9	13	22
Evansville, Ind.	43	27	12	2	1	1	1
Fort Wayne, Ind.	59	33	20	5	-	1	3
Gary, Ind.	18	9	4	3	2	-	1
Grand Rapids, Mich.	56	43	7	5	-	1	-
Indianapolis, Ind.	140	91	36	7	3	3	4
Madison, Wis.	44	24	8	2	1	9	4
Milwaukee, Wis.	134	91	31	4	5	3	-
Peoria, Ill.	40	22	12	1	-	5	6
Rockford, Ill.	37	24	8	3	-	2	3
South Bend, Ind.	48	32	9	6	-	1	3
Toledo, Ohio §	123	114	1	1	3	2	4
Youngstown, Ohio	45	33	10	-	-	2	-
W.N. CENTRAL	724	489	163	27	26	23	19
Des Moines, Iowa	55	45	6	2	2	-	-
Duluth, Minn.	27	18	4	1	2	2	1
Kansas City, Kans.	42	22	12	2	4	2	1
Kansas City, Mo.	130	85	30	6	4	5	3
Lincoln, Nebr.	21	15	5	1	-	-	1
Minneapolis, Minn.	90	62	21	3	2	2	4
Omaha, Nebr.	97	58	31	-	3	5	-
St. Louis, Mo.	165	118	31	5	6	5	5
St. Paul, Minn.	51	37	9	3	1	1	1
Wichita, Kans.	50	29	14	4	2	1	3
S. ATLANTIC	1,385	792	361	106	57	68	47
Atlanta, Ga.	159	77	52	8	4	18	1
Baltimore, Md.	353	187	98	23	30	15	10
Charlotte, N.C.	57	25	22	5	-	5	1
Jacksonville, Fla.	99	69	24	2	2	2	3
Miami, Fla.	117	63	36	6	7	5	2
Norfolk, Va.	60	34	16	4	3	3	1
Richmond, Va.	86	53	24	5	2	2	8
Savannah, Ga.	41	24	11	6	-	-	2
St. Petersburg, Fla.	103	91	6	6	-	-	10
Tampa, Fla.	87	65	15	5	1	1	3
Washington, D.C.	169	70	45	31	7	15	6
Wilmington, Del.	54	34	12	5	1	2	-
E.S. CENTRAL	653	423	160	29	15	26	26
Birmingham, Ala.	117	83	22	5	1	6	3
Chattanooga, Tenn.	66	48	14	2	2	-	6
Knoxville, Tenn.	55	37	15	1	2	-	1
Louisville, Ky.	87	50	24	6	2	5	3
Memphis, Tenn.	118	73	30	4	1	10	6
Mobile, Ala.	73	49	16	3	1	4	3
Montgomery, Ala.	44	33	10	-	1	-	2
Nashville, Tenn.	93	50	29	8	5	1	2
W.S. CENTRAL	1,658	873	454	164	96	71	46
Austin, Tex.	43	24	10	6	2	1	2
Baton Rouge, La.	32	14	9	7	1	1	2
Corpus Christi, Tex.	49	31	11	3	1	3	2
Dallas, Tex.	172	78	59	13	13	9	1
El Paso, Tex.	61	35	18	4	2	2	3
Fort Worth, Tex.	74	38	22	3	4	7	4
Houston, Tex.	651	308	185	87	42	29	10
Little Rock, Ark.	69	37	21	5	4	2	4
New Orleans, La.	188	110	40	13	13	12	1
San Antonio, Tex.	173	107	42	13	8	3	7
Shreveport, La.	71	47	18	4	1	1	5
Tulsa, Okla.	75	44	19	6	5	1	5
MOUNTAIN	583	348	142	35	27	31	23
Albuquerque, N.Mex.	67	41	16	3	5	2	-
Colo. Springs, Colo.	31	16	7	4	2	2	4
Denver, Colo.	120	74	30	7	4	5	2
Las Vegas, Nev.	66	30	23	6	5	2	10
Ogden, Utah	22	19	2	1	-	-	-
Phoenix, Ariz.	121	70	33	6	3	12	1
Pueblo, Colo.	22	17	3	1	1	-	1
Salt Lake City, Utah	58	30	15	4	4	5	2
Tucson, Ariz.	76	51	16	3	3	3	3
PACIFIC	1,783	1,185	375	103	55	65	87
Berkeley, Calif.	20	14	3	2	1	-	1
Fresno, Calif.	72	46	15	5	5	1	3
Glendale, Calif.	41	32	6	2	1	-	-
Honolulu, Hawaii	79	47	21	2	5	4	7
Long Beach, Calif.	82	55	18	3	5	1	3
Los Angeles, Calif.	513	337	112	33	12	19	17
Oakland, Calif.	77	52	15	4	3	3	6
Pasadena, Calif.	34	30	2	2	-	-	4
Portland, Oreg.	118	84	21	6	2	5	11
Sacramento, Calif.	55	41	8	2	1	3	4
San Diego, Calif.	142	80	43	7	6	6	11
San Francisco, Calif.	150	101	31	12	2	4	2
San Jose, Calif.	167	109	34	14	6	4	11
Seattle, Wash.	129	89	24	6	4	6	2
Spokane, Wash.	51	35	9	2	-	5	1
Tacoma, Wash.	53	33	13	1	2	4	4
TOTAL	12,078††	7,552	2,835	784	427	473	451

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

ACIP Recommendation – Rabies

Data are not available to support the use of intradermal vaccination for post-exposure use, and the Committee emphasizes the need to continue to use only the 1.0-ml IM regimen for post-exposure treatment.

Editorial Note: Although the Committee has determined that the 0.1-ml ID regimen is an acceptable alternative for pre-exposure prophylaxis, the manufacturer—Merieux Institute—has not yet formally requested approval from the Food and Drug Administration's Bureau of Biologics (BOB) for the vaccine to be administered according to this alternate regimen. The currently available 1.0-ml vaccine package is approved only for IM use and is not recommended for multi-dose use if the 0.1-ml ID regimen is used. Although BOB concurs with the interpretation of the clinical data, FDA approval for the use of Merieux's HDCV rabies vaccine by the ID route can be obtained after the manufacturer makes necessary packaging and labelling changes. ***It is emphasized that the ACIP has accepted the ID regimen only for pre-exposure vaccination.***

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Epidemiologic Notes and Reports

Multiresistant *Salmonella* and Other Infections in Adopted Infants from India

Since January 1981, multiresistant *Salmonella* serotypes have been isolated from 33 infants adopted by U.S. parents from one nursery in Calcutta, India. ***Shigella, Campylobacter,*** and ***Plasmodium vivax*** have also been isolated from some of these infants. Persons in 31 states have adopted infants from this nursery, although 3 states—Minnesota, Oregon, and Washington—have received 86 (49%) of the 176 infants sent for adoption. Most ill infants have had diarrhea and various levels of malnutrition that have required only supportive measures. However, 7 of the 33 infants have required hospitalization—3 for diarrhea and dehydration, 3 for malnutrition and *P. vivax* malaria, and 1 for *Salmonella* meningitis. There have been no deaths. Four secondary cases of gastroenteritis occurred among household contacts in 4 families (involving 3 children and 1 mother). Four different *Salmonella* spp., *S. typhimurium, S. alachua, S. mbandaka,* and *S. bareilly,* have been isolated from the adopted infants. All *Salmonella* isolates have been resistant to ampicillin, chloramphenicol, kanamycin, gentamicin, and trimethoprim-sulfamethoxazole. Resistance to tetracycline, cephalothin, and cephamandole has been variable. All *Salmonella* isolates are sensitive to cefotaxime and moxalactam.

The foundling nursery in Calcutta receives babies shortly after birth and sends infants to the United States between the first and second month of life. Most of these infants are born prematurely or are severely underweight and at high risk of developing infectious complications while in the nursery. Despite control efforts, the nursery has had an ongoing problem with *Salmonella* infections for at least 1 year. A particularly severe outbreak of neonatal sal-

Salmonella – Continued

monellosis associated with a high mortality rate was recognized in May 1981. In September 1981, the nursery began to separate infants into cohorts by age and health status. This appeared to be successful in limiting the spread of infection but did not eliminate *Salmonella* from the nursery. The adoption agency in the United States provides information to each set of parents about health problems they may encounter with their newly adopted child.

Reported by N Boucneau, International Mission of Hope; J Allard, PhD, State Epidemiologist, Washington State Dept of Social and Health Svcs; J Korlath, M Osterholm, PhD, AG Dean, MD, State Epidemiologist, Minnesota State Dept of Health; P Williams, DVM, JA Googins, MD, State Epidemiologist, Oregon Dept of Human Resources; K Powell, MD, Dept of Pediatrics, Strong Memorial Hospital, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; Enteric Diseases Br, Div of Bacterial Diseases, Antimicrobial and Infection Mechanisms Br, Hospital Infection Program, Center for Infectious Diseases, Field Services Div, Epidemiology Program Office, CDC.

Editorial Note: Outbreaks due to similarly multiresistant strains of *S. typhimurium* have been reported from India since 1976 (*1,2*). Like *Salmonella wein*, these resistant strains have caused prolonged outbreaks of enteritis in pediatric wards (*2*). Multiresistant *S. alachua* isolates have been reported from Calcutta since 1971 and have frequently been associated with neonatal meningitis in that city (*3,4*). *S. mbandaka* was a rare serotype worldwide and virtually unheard of in the United States until 1977. Since that year the number of isolates has been steadily increasing: 1978 (2), 1979 (14), 1980 (40), 1981 (103). None of these *S. mbandaka* isolates were known to be related to adopted infants from Calcutta. Outbreaks of *S. mbandaka* gastroenteritis have occurred in the United States, but specific vehicles have not been identified. Since *S. alachua* and *S. mbandaka* are rare in the United States, it may be useful to investigate isolates of these serotypes to determine whether they are related to adopted infants from India.

Resistant strains of *Salmonella* are not new to the United States. In 1975, 21% of all *Salmonella* and 49% of *S. typhimurium* strains submitted to CDC were resistant to 2 or more antimicrobials (*5*). The multiresistant *Salmonella* strains from India are of particular concern when associated with infants who are malnourished. If these strains are associated with extraintestinal illness, they can be a problem, since they are resistant to drugs of proven efficacy for extraintestinal salmonellosis—chloramphenicol, ampicillin, gentamicin, and trimethoprim-sulfamethoxazole. Infants with extraintestinal infection could be treated with a third generation cephalosporin pending the results of sensitivity tests of their infections.

Secondary spread of *Salmonella*, when the patient with the index case is an infant, has been reported, and Leeder (*6*) found 31% of household contacts infected in a study in Michigan. Enteric isolation should reduce this problem and should be vigorously enforced to prevent the nosocomial spread of these strains.

Few clinical data are available concerning the use of third-generation cephalosporins in the treatment of extraintestinal salmonellosis. However, the minimal inhibitory concentration for several of these newer cephalosporins is quite low, and central nervous system penetration is sufficient so that they should be effective even in treating meningitis. Moxalactam has been most extensively studied and has been shown to be effective in the treatment of meningitis caused by other gram-negative organisms (*7*).

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Salmonella – Continued

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Mushroom Poisoning among Laotian Refugees — 1981

In the period, December 1-3, 1981, 7 Laotian refugees were seen at a Sonoma County California hospital for apparent mushroom poisoning; 6 had nausea, vomiting, diarrhea, dehydration, and elevated liver enzymes. All persons had eaten mushrooms that were gathered and eaten on November 30, although 1 week earlier 20-30 Laotians had eaten mushrooms gathered in the same area without incident. The incubation period was variable, but most patients experienced gastrointestinal distress within 8 hours. Three persons were treated in the intensive care unit, but all recovered and were discharged within 7 days.

Several remaining cooked mushrooms were examined at Sonoma State University; all but 1 were identified as *Russula* species. The remaining specimen could not be identified, probably because of cooking. The mushrooms examined may not have been representative of those actually consumed.

Laotians customarily gather wild mushrooms in their homeland and attempt to identify poisonous species by boiling the mushrooms with rice; if the rice turns red, the mushrooms are deemed poisonous. Because the Sonoma County mushrooms did not cause a color reaction, it was assumed they were safe to eat.

Reported by K Rattanvilay, N Tavares, G Eliaser, MD, G Hands, MD, S Boynton, Community Hospital, Santa Rosa; J Young, PHN, R Holtzer, MD, Sonoma County Health Dept, TG Tong, PharmD, San Francisco Poison Control Center, RR Roberto, MD, SB Werner, MD, Infectious Disease Section, California Dept of Health Svcs; Enteric Bacteriology and Epidemiology Branch, CDC.

Editorial Note: Mushroom poisoning can be produced by about 100 of the 2,000 species known. In the United States, mushrooms of the genera *Amanita* and *Galerina* produce amanitins and phallotoxins, which are common causes of mushroom poisoning. The most feared fungi are those that produce amanitin, which include the "deathcap" *Amanita phalloides*. *A. phalloides* has become increasingly common in the San Francisco bay region in recent years. The odor of fresh *A. phalloides* is similar to raw potatoes. Symptoms generally begin 6-24 hours after ingestion and may include the explosive onset of violent abdominal pain, vomiting, diarrhea, hematuria, fever, tachycardia, hypotension, rapid volume depletion, fluid and electro-

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The Morbidity and Mortality Weekly Report, circulation 108,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

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Mushroom Poisoning – Continued

lyte imbalance, and extreme thirst. After a short phase of improvement, hepatic, renal, and central nervous system damage may ensue. The mortality rate is 50%, and those who recover do so slowly. Treatment is supportive, and thioctic acid, charcoal hemoperfusion, and vitamin C may be useful (*1,2*).

Other genera of mushrooms, including the ***Russula*** genus implicated in the California outbreak, produce less lethal toxins. The ***Russula*** toxin has not been identified, but it results in a shorter incubation period—1-2 hours—followed by minor gastrointestinal and parasympathetic symptoms and hallucinations (*1*). ***Russula emetica*** can produce additional toxins, including muscarine.

Most cases of mushroom poisoning occur in late summer and early fall. Early abundant rains and mild temperatures in northern California have produced a profusion of mushrooms, some of which are poisonous. Nontoxic mushrooms may grow in the same area with toxic ones, and even trained mycologists may confuse toxic varieties with edible ones because of the extensive variations among species. There are no simple tests to identify poisonous mushrooms and no safe ways to detoxify the poisonous varieties.

Identification of implicated mushrooms may be difficult if specimens have been prepared and cooked. Since a variety of mushrooms may have been ingested in most poisoning situations, reliance cannot be placed on the initial symptoms. Gastric contents, stool, and mushroom samples may be assayed for toxins by radioimmunoassay (*3*).

The San Francisco Poison Control Center recommends routine administration of ipecac after ingestion of any wild mushrooms of questionable identification. The Infectious Disease Section offers its assistance in suspected mushroom poisoning, and information is available from local mycological societies, colleges, and poison control centers.

In the last 5 years, 16 outbreaks involving 44 cases of mushroom poisoning were reported to CDC; 23 cases were from California. In 1981 in California, 1 death in Santa Cruz County and 2 in Marin County were attributed to mushroom poisoning.

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Surgeon General's Advisory on the Use of Salicylates and Reye Syndrome

Because the use of salicylates such as aspirin for children with influenza and chickenpox has been associated with Reye syndrome, the Surgeon General advises against use of salicylate and salicylate-containing medications for children with these diseases. The association of salicylates with Reye syndrome is based upon evidence from epidemiologic studies that are sufficiently strong to justify this warning to parents and health care personnel.

First recognized about 19 years ago, Reye syndrome is a rare, acute, life-threatening condition characterized by vomiting and lethargy that may progress to delirium and coma. Most commonly it occurs in children who are recovering from viral infections, particularly influenza and chickenpox. The Centers for Disease Control (CDC) estimates that 600-1,200 cases occur each year in the United States, most in persons between the ages of 5 and 16 years. Death occurs in 20%-30% of reported cases, and permanent brain damage has also been reported in survivors.

There have been reports for several years suggesting an association between Reye syndrome and the prior use of common medications. However, the results of recent case-control studies have made it possible to assess the association with specific drugs. These studies conducted by state health departments suggest an association between prior ingestion of aspirin and other salicylates and Reye syndrome. The studies in Arizona and Michigan have been published (*1,2*). The largest of these studies, conducted in Ohio, is expected to appear shortly in the *Journal of the American Medical Association*.

The Surgeon General notes that the matter has been reviewed recently by several groups from within and outside government.

- CDC, on the basis of its review of the available data and the recommendations of an advisory panel on February 12, 1982, stated that "until definitive information is available, CDC advises physicians and parents of the possible increased risk of Reye syndrome associated with the use of salicylates for children with chickenpox and influenza-like illness" (*3*).
- The American Academy of Pediatrics' Committee on Infectious Diseases also has reviewed the data, and in the June 1982 issue of *Pediatrics* issued a statement advising that the use of salicylates should be avoided for children suffering from influenza or chickenpox (*4*).
- A Food and Drug Administration (FDA) working group audited the raw data in February 1982 from 3 studies conducted by state health departments (2 in Michigan and 1 in Ohio) and independently analyzed the data. The FDA evaluation was discussed in an open public meeting sponsored by FDA, CDC, and the National Institutes of Health on May 24, 1982. The meeting was attended by invited experts from the academic com-

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munity, the drug industry, and consumer organizations. It was the consensus of the scientific working group at the completion of the meeting that the new analysis supported the earlier evidence of an association between salicylates and Reye syndrome.

As a result of this entire review process, the Surgeon General advises against the use of salicylates and salicylate-containing medications for children with influenza and chickenpox.*

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*The Surgeon General notes that the FDA will notify health professionals through its *Drug Bulletin*, will develop lay-language information for widespread distribution, and will take the steps necessary to establish new labeling requirements for drugs containing salicylates.

Epidemiologic Notes and Reports

Neonatal Deaths Associated With Use Of Benzyl Alcohol — United States

Sixteen neonatal deaths thought to be caused by the benzyl alcohol preservative used in some intravascular solutions have been reported to the Food and Drug Administration (FDA) by 2 medical centers (*1,2*). The deaths occurred in pre-term neonates weighing <2500 gms who had central intravascular catheters flushed periodically each day with bacteriostatic normal saline containing 9 mg/ml benzyl alcohol. Ten deaths occurred in 1 institution over a 6-month period and 6 deaths occurred in the other institution over a 16-month period. Investigators in the 2 hospitals have reported that similar deaths have not occurred since flush solutions without preservatives have been substituted for those with the benzyl alcohol.

Onset of toxic illness in the infants occurred between several days and a few weeks of age with a characteristic clinical picture that included metabolic acidosis progressing to respiratory distress and gasping respirations. Many infants also had central-nervous-system dysfunction, including convulsions and intracranial hemorrhage; hypotension leading to cardiovascular collapse was a late finding usually presaging death.

Gas chromatographic analysis demonstrated benzyl alcohol or its metabolites in blood and urine samples from infants in 1 hospital. Retrospective analysis of urine samples from 5 infants in the other hospital for organic acid profile by gas-liquid chromatography showed urine benzoate levels of 4.4-16.1 mg/mg creatinine and hippurate levels of 7.4-33.3 mg/mg creatinine (normal values = 0-trace); serum benzoic acid levels were 8.4-28.7 mEq/L (normal = 0). Review of the medical records of the affected infants resulted in estimates of daily intake of benzyl alcohol ranging from 99 to 405 mg/kg/day.

Based on these reports, the FDA has recommended that intravascular flush solutions containing benzyl alcohol not be used for newborns and that diluents with this preservative not be used as medications for these infants.

Illness suspected of having been caused by use of benzyl alcohol should be reported promptly to the FDA, Division of Drug Experience, Attn: Judith K. Jones, M.D., Ph.D., Room 15-B-07, HFD-210, 5600 Fishers Lane, Rockville, Maryland 20857; telephone (301)443-4580.

Reported by JJ Gershanik, B Beecher, W George, A Sole, M Leither, C Kapadious, Southern Baptist Hospi-

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tal, New Orleans, Louisiana; WJ Brown, NRM Buist, HTC Gipson, RK Huston, NG Kennaway, Oregon Health Sciences University, Portland; Div of Drug Experience, Office of Biometrics and Epidemiology, Bureau of Drugs and Biologics, FDA; Chronic Disease Div, Center for Environmental Health, Hospital Infections Program, Center for Infectious Diseases, CDC.

Editorial Note: Benzyl alcohol is an aromatic alcohol usually used in a concentration of 0.9% as a bacteriostatic preservative in multiple-dose vials of solutions or drugs for parenteral therapy. Bacteriostatic sodium chloride, USP, is frequently used in the management of critically ill patients to flush intravascular catheters after the addition of medications or the withdrawal of blood; and sterile bacteriostatic water for injection, USP, is used to dilute or reconstitute medications for intravenous use. In addition, medications, such as some formulations of sodium heparin, USP, that are frequently used for infants and other critically ill patients may be preserved with benzyl alcohol.

Toxic effects of benzyl alcohol, including respiratory failure, vasodilation, hypotension, convulsions, and paralysis have been known for years (*3-5*). However, little is known about the toxic effects or levels of benzyl alcohol in neonates, especially in sick premature infants. Animal toxicity studies (*6*) show an LD_{50} of approximately 33 ml/kg (300 mg/kg) in rats treated by rapid intravenous infusion with 0.9% benzyl alcohol, although 40 ml/kg (360 mg/kg) by slow intravenous infusion was tolerated without mortality. Adult dogs were killed by doses of 88-113 ml/kg (830-1060 mg/kg) of 0.9% benzyl alcohol intravenously, but tolerated smaller infusions without signs of toxicity. The serum half-life of benzyl alcohol in adult dogs is estimated at 1.5 hours. On the basis of the animal studies, it has been estimated that rapid intravenous infusion of adult humans with as much as 30 ml of 0.9% benzyl alcohol (approximately 4.5 mg/kg) in saline should be safe (*6*).

Benzyl alcohol is normally oxidized rapidly to benzoic acid, conjugated with glycine in the liver, and excreted as hippuric acid. However, this metabolic pathway may not be well developed in premature infants. The benzyl alcohol may therefore have been metabolized to benzoic acid, which could not be conjugated by the immature liver but accumulated, causing metabolic acidosis (*2*).

These reports of neonatal toxicity from benzyl alcohol are highly noteworthy. However, caution must be exercised in attributing individual illness to benzyl alcohol since many of the described clinical features commonly occur in neonates seriously ill from other causes. Newborns most likely to receive large volumes of flush solutions, relative to body weight, are the very small, sick premature infants who already have a high risk of mortality. Thus, mortality potentially attributable to benzyl alcohol should also be assessed by a careful comparison of neonatal mortality in newborns receiving large amounts of non-bacteriostatic flush solutions and medications with comparable newborns receiving large amounts of bacteriostatic solutions and medications. Retrospective analyses of newborns who received saline flushes with benzyl alcohol and survived are also needed to establish whether a dose-response relationship exists between clinical and laboratory findings and the intensity of exposures to benzyl alcohol, and to identify more completely the pathologic and clinical features of toxicity in newborns.

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Perspectives in Disease Prevention and Health Promotion

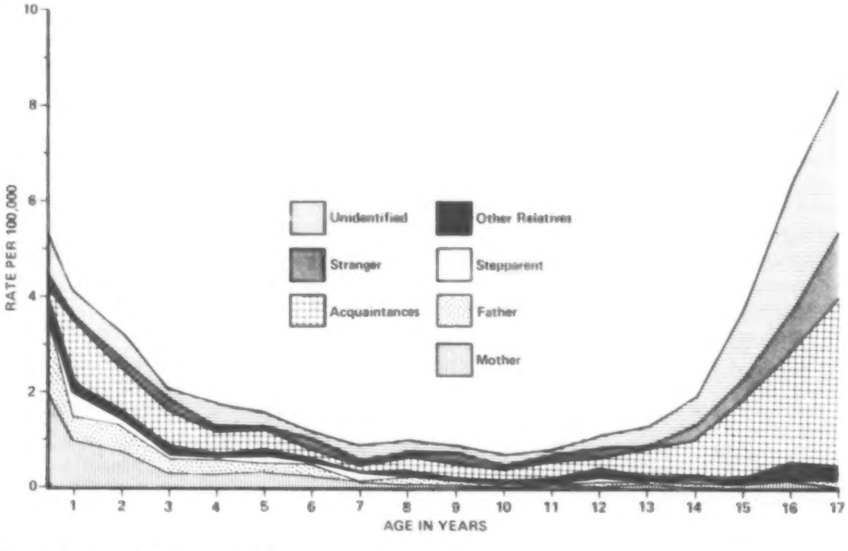
Child Homicide — United States

Homicide is one of the 5 leading causes of death in the United States for all persons 1-17 years of age (*1*). In 1978, 5.1% of all deaths nationally among persons 1-17 years of age were due to homicide, as compared with 1.0% of all deaths of persons ≥18 years of age. Since 1925, homicide rates have risen over 6-fold for persons 1-4 years old and over 2-fold for persons 5-14 years old (*1*). In 1979, homicides of children (persons <18 years old) accounted for over 90,000 person years of potential life lost.

From 1976 through 1979, 9% of homicide victims reported to the Federal Bureau of Investigation-Uniform Crime Reporting System were <18 years old (*2*). Three percent of these child homicide victims were ≤1 week old and 9% were >1 week but <1 year of age. In 1979, child-homicide rates for males were 3.3/100,000 males and for females, 2.0/100,000 females. For children ≤12 years of age, homicide rates for males and females were similar, but for children over 12 years of age, homicide was predominantly a male victim/male offender phenomenon. Age-specific incidence rates for child homicide in 1979 are shown in Figure 1. Rates peaked for infants and teenagers.

The relationships between victims and offenders varied with the victim's age, regardless of his/her sex or race (Figure 1). Nationally, 29% of child homicides were perpetrated by the victim's parent or stepparent, 35% were perpetrated by an acquaintance, and 10% were perpetrated by strangers. The offender could not be determined in 26% of child homicides. As the age of the victim increased, the relationships shifted from being intrafamilial to extrafamil-

FIGURE 1. Child homicide, United States, 1979 victim-specific rates*, by age of victim and by relation of offender to victim†



*Total number of victims = 1,620.

†Based on the relationship between first-specified victim and first-specified offender for incidents in which the first-specified (listed) victim was a child.

Child Homicide – Continued

ial in nature. The majority of homicides of 3-year-old children were not committed by relatives, and for victims over 12 years of age, homicides by acquaintances consistently predominated.

For most child homicides, the event precipitating the homicide was poorly described, and the description varied with the relationship between the victim and the offender. The majority (78%) of intrafamilial homicides had undefined precipitating circumstances, 18% involved an argument; and the remaining were due to miscellaneous causes. Forty-four percent of homicides by an acquaintance involved an argument; 5% involved a gang fight; and 51% had undefined or miscellaneous precipitating circumstances. Twenty-two percent of homicides by a stranger involved arguments; 37% occurred during the offender's perpetration of another crime; and 41% had undefined or miscellaneous precipitating circumstances. Overall, 25% of all child homicide incidents occurred during arguments; 3% during gang fights, 4%, during sexual assualt by the offender; and 10%, during the offender's perpetration of another crime. Fifty-eight percent had undefined or miscellaneous precipitating circumstances.

As with the relationship between victim and offender, the weapon used in homicide varied with the age of the victim, . This variation was independent of the child's sex, race, or relationship to the offender. The use of bodily force or a blunt object predominated for victims ≤ 9 years of age. Guns or knives were used in over one-third of the homicides involving victims over 3 years of age and in over one-half of those involving victims more than 9 years of age. Overall, guns were used in 40% of child homicides; knives, in 15%; strangulation, in 6%; and other specified means, in 31%. The weapon was not specified in 7% of cases.

Reported by the Office of the Center Director, Center for Health Promotion and Education, CDC.

Editorial Note: Interest in the problem of violence toward children has grown in association with the public's increasing awareness of the issue of child abuse. Data on child abuse are limited by variations in definition and in surveillance methods; however, a recent national study estimated the incidence of child abuse at 3.4/1,000 (*3*). Although child abuse is not specifically a parent/child phenomenon, authors frequently concentrate on this aspect of the problem. Similarly, studies of child homicide have concentrated upon cases of child homicide by parents (*4-6*). The information presented in these studies indicates that homicides committed by parents constitute a minority of all child homicides and represent only one end of the child homicide spectrum. In fact, there appear to be 2 patterns of child homicide. The first predominates when victims are less than 3 years of age. This type of child homicide is characterized by familial violence, ill-defined circumstances, and the use of bodily force rather than guns or knives. It could be defined as fatal child abuse. The second type of child homicide, predominantly involving victims over 12 years of age, is characterized by extrafamilial violence, association with arguments or the offender's criminal behavior, and the use of guns or knives. This pattern may represent a child thrust into an adult environment or life-style for which he/she is not developmentally prepared and in which he/she is not properly supervised. As a major and increasing cause of death, this type of child homicide and violence is now generally ignored, but merits public health attention and might be defined as fatal parental/societal neglect. Homicides involving victims 3-12 years of age appear to be a mixture of these 2 homicide patterns. Preventive measures based upon parent education, family planning, neighborhood networking, and stress reduction may have an impact on fatal child abuse. Research is needed to determine whether such measures will also have an impact upon fatal parental/societal neglect and whether this second pattern of child homicide represents extrafamilial duplication of intrafamilial violence.

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Child Homicide – Continued

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Epidemiologic Notes and Reports

Update on Kaposi's Sarcoma and Opportunistic Infections in Previously Healthy Persons – United States

Between June 1, 1981, and May 28, 1982, CDC received reports of 355 cases* of Kaposi's sarcoma (KS) and/or serious opportunistic infections (OI), especially *Pneumocystis carinii*

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*A case is defined as illness in a person who 1) has either biopsy-proven KS or biopsy- or culture-proven, life-threatening opportunistic infection, 2) is under age 60, and 3) has no history of either immunosuppressive underlying illness or immunosuppressive therapy.

(Continued on page 300)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE	22nd WEEK ENDING			CUMULATIVE, FIRST 22 WEEKS		
	June 5 1982	June 6 1981	MEDIAN 1977-1981	June 5 1982	June 6 1981	MEDIAN 1977-1981
Aseptic meningitis	67	96	67	1,622	1,523	1,090
Brucellosis	2	3	2	53	55	72
Encephalitis: Primary (arthropod-borne & unspec.)	12	16	16	309	295	260
Post-infectious	–	1	2	28	42	83
Gonorrhea: Civilian	15,219	17,912	16,850	376,813	409,471	395,017
Military	559	721	471	11,155	12,152	11,414
Hepatitis: Type A	293	526	526	9,238	10,741	12,007
Type B	305	404	339	8,505	8,277	6,870
Non A, Non B	33	N	N	883	N	N
Unspecified	150	206	150	3,778	4,646	4,214
Legionellosis	16	N	N	168	N	N
Leprosy	1	10	3	81	98	73
Malaria	28	26	16	349	546	228
Measles (rubeola)	34	238	617	711	1,939	9,659
Meningococcal infections: Total	57	50	50	1,517	1,918	1,389
Civilian	56	50	49	1,511	1,912	1,374
Military	1	–	–	6	6	10
Mumps	216	110	395	3,401	2,352	8,792
Pertussis	15	18	18	442	431	459
Rubella (German measles)	50	92	342	1,417	1,328	8,515
Syphilis (Primary & Secondary): Civilian	576	441	381	13,758	12,578	10,120
Military	3	7	5	166	156	131
Tuberculosis	483	587	508	10,664	10,945	11,322
Tularemia	4	4	3	47	64	49
Typhoid fever	11	6	10	151	191	175
Typhus fever, tick-borne (RMSF)	51	60	29	185	276	171
Rabies, animal	146	183	119	2,578	3,190	2,004

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	1
Botulism (Wash. 1)	29	Paralytic	1
Cholera	–	Psittacosis (N.J. 1, Fla. 1, Calif. 1)	57
Congenital rubella syndrome	5	Rabies, human	–
Diphtheria	–	Tetanus (Mich. 1, Calif. 1)	29
Leptospirosis (Ohio 1)	27	Trichinosis (NYC 1)	49
Plague	4	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	9

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending June 5, 1982 and June 6, 1981 (22nd week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	67	53	309	28	376,813	409,471	293	305	33	150	16	81
NEW ENGLAND	-	3	15	4	9,271	9,973	3	21	-	10	2	1
Maine	-	-	-	-	416	496	-	4	-	-	-	-
N.H.	-	-	-	-	257	353	-	1	-	-	-	-
Vt.	-	-	-	-	190	190	2	-	-	1	-	-
Mass.	-	-	5	-	4,328	4,374	1	2	-	7	-	-
R.I.	-	-	-	-	627	501	-	2	-	-	-	-
Conn.	-	3	10	4	3,453	4,369	-	12	-	2	2	1
MID. ATLANTIC	6	-	43	6	47,322	47,795	31	36	2	15	7	4
Upstate N.Y.	2	-	16	1	7,625	7,923	16	13	1	6	-	1
N.Y. City	-	-	9	-	19,753	19,354	9	14	-	4	-	1
N.J.	2	-	10	-	8,826	9,419	6	9	1	5	4	1
Pa.	2	-	8	5	11,118	11,109	U	U	U	U	3	1
E.N. CENTRAL	7	-	61	6	51,007	63,643	40	34	3	10	-	1
Ohio	5	-	19	4	15,433	21,691	14	21	2	2	-	-
Ind.	1	-	15	2	6,255	6,065	19	5	1	6	-	-
Ill.	-	-	-	-	11,117	17,273	2	1	-	-	-	1
Mich.	1	-	25	-	13,111	13,178	5	7	-	2	-	-
Wis.	-	-	2	-	5,091	5,486	-	-	-	-	-	-
W.N. CENTRAL	3	4	17	3	19,203	19,227	15	18	1	6	4	-
Minn.	1	-	2	1	2,759	3,137	5	3	-	-	-	-
Iowa	1	1	9	1	1,994	1,958	2	4	-	2	3	-
Mo.	-	1	4	-	8,257	8,740	7	3	1	3	1	-
N. Dak.	-	-	-	-	251	265	-	-	-	-	-	-
S. Dak.	-	-	-	1	520	550	-	1	-	-	-	-
Nebr.	1	-	1	-	1,174	1,520	-	4	-	1	-	-
Kans.	-	2	1	-	3,248	3,057	1	3	-	-	-	-
S. ATLANTIC	8	13	45	5	90,686	100,769	41	61	4	19	1	5
Del.	-	-	-	-	1,541	1,499	-	1	-	1	-	-
Md.	1	-	11	-	12,737	11,130	3	9	1	3	-	2
D.C.	-	-	-	-	5,247	6,428	2	3	-	1	-	-
Va.	-	4	10	-	8,436	9,105	5	9	1	3	-	1
W. Va.	-	-	-	-	1,141	1,516	1	1	-	-	-	-
N.C.	-	-	4	1	15,900	15,703	2	3	-	2	-	-
S.C.	1	2	-	-	9,485	9,501	1	4	-	-	-	-
Ga.	1	1	-	-	9,483	20,202	7	20	-	2	-	-
Fla.	5	6	20	4	26,716	25,685	20	11	2	7	1	2
E.S. CENTRAL	1	7	17	1	32,913	34,038	10	14	1	-	-	-
Ky.	-	-	-	-	4,391	4,317	2	2	-	-	-	-
Tenn.	1	4	9	-	12,719	12,650	6	7	1	-	-	-
Ala.	-	2	5	1	9,898	10,748	-	3	-	-	-	-
Miss.	-	1	3	-	5,905	6,323	2	2	-	-	-	-
W.S. CENTRAL	9	14	33	-	54,576	53,889	48	25	2	34	2	8
Ark.	-	3	1	-	4,539	3,738	1	3	1	3	-	-
La.	-	2	4	-	10,039	8,717	5	2	-	2	-	-
Okla.	2	3	9	-	5,854	5,663	9	2	1	-	2	-
Tex.	7	6	19	-	34,144	35,771	33	18	-	25	-	8
MOUNTAIN	4	-	16	1	13,596	15,983	28	11	2	7	-	2
Mont.	-	-	-	-	565	548	1	-	-	-	-	-
Idaho	-	-	-	-	636	690	3	1	1	-	-	1
Wyo.	-	-	-	-	386	370	2	1	-	-	-	-
Colo.	4	-	6	1	3,582	4,361	7	6	-	4	-	-
N. Mex.	-	-	-	-	1,686	1,758	2	-	-	-	-	-
Ariz.	-	-	6	-	3,721	4,928	-	-	-	-	-	-
Utah	-	-	-	-	614	752	4	1	1	-	-	1
Nev.	-	-	4	-	2,406	2,576	9	2	-	3	-	-
PACIFIC	29	12	62	2	59,239	64,113	77	85	18	45	-	60
Wash.	-	-	6	-	4,882	5,397	10	10	-	3	-	6
Oreg.	-	-	1	-	3,285	4,192	9	1	1	2	-	-
Calif.	26	11	51	2	48,552	51,662	56	74	17	39	-	34
Alaska	-	1	3	-	1,485	1,618	-	-	-	-	-	1
Hawaii	3	-	1	-	1,035	1,244	2	-	-	1	-	19
Guam	U	-	-	-	33	59	U	U	U	U	U	-
P.R.	-	-	1	-	1,198	1,399	6	2	-	6	-	-
V.I.	U	-	-	-	66	61	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	36	176	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 5, 1982 and June 6, 1981 (22nd week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	28	349	34	711	1,939	57	1,517	216	3,401	15	50	1,417	1,328
NEW ENGLAND	–	21	–	8	71	2	84	2	142	–	2	12	100
Maine	–	–	–	–	5	1	3	–	32	–	–	–	33
N.H.	–	–	–	1	6	–	11	–	12	–	–	8	41
Vt.	–	–	–	2	2	–	4	1	5	–	–	–	–
Mass.	–	16	–	2	51	–	22	1	70	–	1	1	16
R.I.	–	1	–	–	–	–	11	–	11	–	–	1	–
Conn.	–	4	–	3	7	1	33	–	12	–	1	2	10
MID. ATLANTIC	3	41	17	96	612	11	257	6	216	–	–	73	149
Upstate N.Y.	1	10	12	67	182	3	64	4	40	–	–	34	62
N.Y. City	1	15	3	21	48	3	50	1	34	–	–	26	41
N.J.	1	11	2	4	48	–	53	1	31	–	–	13	42
Pa.	–	5	–	4	334	5	90	–	111	–	–	–	4
E.N. CENTRAL	1	24	1	33	70	7	184	100	1,931	3	6	127	287
Ohio	1	7	–	–	15	6	76	87	1,445	2	–	–	–
Ind.	-	1	–	2	7	–	15	2	30	–	1	20	97
Ill.	–	3	–	15	20	1	46	6	129	1	2	48	67
Mich.	–	11	1	16	27	–	36	5	252	–	3	42	31
Wis.	–	2	–	–	1	–	11	–	71	–	–	17	92
W.N. CENTRAL	–	9	12	31	6	4	65	83	393	1	2	54	71
Minn.	–	–	–	–	2	1	13	82	280	–	–	5	7
Iowa	–	3	–	–	1	–	5	1	28	–	–	–	3
Mo.	–	3	–	2	1	–	20	–	13	1	–	38	2
N. Dak.	–	–	–	–	–	–	5	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	3	–	1	–	–	1	–
Nebr.	–	2	–	–	1	3	8	–	–	–	–	–	1
Kans.	–	1	12	29	1	–	11	–	71	–	2	10	58
S. ATLANTIC	2	53	1	32	306	12	312	8	196	3	6	52	107
Del.	–	–	–	–	–	–	–	–	5	–	–	1	1
Md.	–	7	–	2	1	3	20	3	18	–	4	26	1
D.C.	–	3	–	1	1	–	2	–	–	–	–	–	–
Va.	2	21	–	14	3	1	33	1	30	1	–	8	3
W. Va.	–	2	–	1	7	–	7	1	80	–	–	1	17
N.C.	–	–	–	–	3	4	59	1	8	–	–	1	4
S.C.	–	3	–	–	–	1	37	–	11	–	–	1	7
Ga.	–	8	–	–	99	–	65	–	8	–	–	4	29
Fla.	–	9	1	14	192	3	89	2	36	2	2	10	45
E.S. CENTRAL	–	5	–	6	–	2	98	–	27	1	–	36	22
Ky.	–	4	–	1	–	–	14	–	9	–	–	20	13
Tenn.	–	–	–	4	–	–	39	–	11	1	–	–	8
Ala.	–	–	–	–	–	1	39	–	4	–	–	–	1
Miss.	–	1	–	1	–	1	6	–	3	–	–	16	–
W.S. CENTRAL	–	27	1	21	607	6	188	3	125	3	1	75	105
Ark.	–	3	–	–	–	–	11	–	6	–	–	–	2
La.	–	3	–	–	–	–	34	–	3	1	–	–	9
Okla.	–	3	–	–	5	2	16	–	–	1	1	3	–
Tex.	–	18	1	21	602	4	127	3	116	1	–	72	94
MOUNTAIN	2	8	–	–	24	1	80	3	52	3	3	45	61
Mont.	–	–	–	–	–	–	4	–	3	–	1	4	3
Idaho	–	–	–	–	1	–	6	1	3	–	–	–	2
Wyo.	–	–	–	–	–	–	4	–	2	–	–	5	1
Colo.	–	4	–	–	5	1	31	1	8	–	–	4	29
N. Mex.	1	2	–	–	5	–	11	–	–	1	1	3	4
Ariz.	–	1	–	–	3	–	14	1	23	2	–	7	13
Utah	1	1	–	–	–	–	7	–	11	–	1	13	3
Nev.	–	–	–	–	10	–	3	–	2	–	–	9	6
PACIFIC	20	161	2	484	243	12	249	11	319	1	30	943	426
Wash.	1	8	–	24	1	3	27	7	55	–	1	24	47
Oreg.	–	5	–	–	3	3	51	–	–	–	–	3	48
Calif.	19	146	–	456	237	6	159	4	252	1	29	908	326
Alaska	–	–	1	1	–	–	9	–	6	–	–	1	–
Hawaii	–	2	1	3	2	–	3	–	6	–	–	7	5
Guam	U	1	U	–	6	U	1	U	1	U	U	1	1
P.R.	–	4	1	62	182	1	5	2	37	–	–	4	3
V.I.	U	–	U	–	6	U	–	U	–	U	U	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 5, 1982 and June 6, 1981 (22nd week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	13,758	12,579	483	10,664	47	11	151	51	185	2,578
NEW ENGLAND	247	273	9	289	-	-	11	-	1	20
Maine	1	1	1	23	-	-	-	-	-	19
N.H.	-	12	-	13	-	-	-	-	-	-
Vt.	1	13	1	7	-	-	2	-	-	-
Mass.	172	175	4	191	-	-	8	-	-	-
R.I.	12	16	1	11	-	-	-	-	1	-
Conn.	61	56	2	44	-	-	1	-	-	1
MID. ATLANTIC	1,874	1,898	81	1,792	3	4	24	3	3	55
Upstate N.Y.	198	175	13	319	3	-	2	-	-	30
N.Y. City	1,133	1,146	31	663	-	4	17	-	-	-
N.J.	237	251	37	361	-	-	3	2	2	1
Pa.	306	326	-	445	-	-	2	1	1	24
E.N. CENTRAL	721	875	60	1,620	-	-	13	10	18	294
Ohio	135	114	9	272	-	-	6	10	17	45
Ind.	93	86	6	205	-	-	-	-	-	43
Ill.	317	471	20	642	-	-	3	-	1	137
Mich.	128	159	19	411	-	-	4	-	-	2
Wis.	48	45	6	90	-	-	-	-	-	67
W.N. CENTRAL	270	248	9	326	8	1	4	1	4	571
Minn.	48	90	1	53	-	1	1	-	-	91
Iowa	14	13	-	43	1	-	1	-	-	177
Mo.	164	120	-	149	5	-	1	1	2	59
N. Dak.	4	6	-	6	-	-	-	-	-	54
S. Dak.	-	2	3	13	-	-	-	-	-	47
Nebr.	8	3	1	15	-	-	-	-	-	67
Kans.	32	14	4	47	2	-	1	-	2	76
S. ATLANTIC	3,811	3,302	137	2,168	7	2	22	30	103	409
Del.	8	7	4	25	-	-	-	-	-	-
Md.	218	259	6	259	1	-	6	4	15	19
D.C.	233	276	2	83	-	-	-	-	-	-
Va.	260	307	22	242	1	-	2	4	11	208
W. Va.	13	9	7	67	-	-	2	2	3	20
N.C.	266	249	10	339	-	-	-	15	47	18
S.C.	191	227	18	217	4	-	2	5	24	23
Ga.	785	848	33	327	-	-	-	-	3	91
Fla.	1,837	1,120	35	609	1	2	10	-	-	30
E.S. CENTRAL	960	834	48	968	6	-	11	1	11	319
Ky.	53	39	4	257	-	-	-	-	-	59
Tenn.	260	335	14	323	4	-	2	1	6	215
Ala.	344	219	2	272	-	-	7	-	3	45
Miss.	303	241	28	116	2	-	2	-	2	-
W.S. CENTRAL	3,490	3,018	64	1,228	16	3	12	6	41	540
Ark.	89	60	7	117	9	1	1	2	7	73
La.	743	671	4	223	1	-	-	-	-	15
Okla.	74	78	14	172	6	-	2	2	19	106
Tex.	2,584	2,209	39	716	-	2	9	2	15	346
MOUNTAIN	351	310	12	316	4	-	6	-	3	82
Mont.	2	8	1	25	-	-	-	-	-	34
Idaho	17	7	-	13	1	-	-	-	1	1
Wyo.	10	4	-	2	1	-	-	-	1	5
Colo.	101	99	4	39	-	-	2	-	-	5
N. Mex.	76	67	4	60	-	-	-	-	1	8
Ariz.	80	69	2	127	-	-	3	-	-	26
Utah	11	8	-	15	2	-	1	-	-	1
Nev.	54	48	1	35	-	-	-	-	-	2
PACIFIC	2,034	1,820	63	1,958	3	1	48	-	1	288
Wash.	53	66	-	112	1	-	2	-	-	-
Oreg.	56	40	6	75	-	-	1	-	-	-
Calif.	1,864	1,673	48	1,593	2	1	44	-	1	219
Alaska	7	6	-	24	-	-	-	-	-	69
Hawaii	54	35	9	154	-	-	1	-	-	-
Guam	1	-	U	2	-	U	-	U	-	-
P.R.	256	300	-	140	-	-	1	-	-	24
V.I.	1	4	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending June 5, 1982 (22nd week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS) ALL AGES	>65	45-64	25-44	1-24	<1	P&I** TOTAL
NEW ENGLAND	612	413	146	21	17	15	52
Boston, Mass.	164	102	37	12	9	4	23
Bridgeport, Conn.	47	27	14	4	1	1	2
Cambridge, Mass.	23	17	6	-	-	-	5
Fall River, Mass.	25	20	4	1	-	-	-
Hartford, Conn.	57	32	18	1	2	4	2
Lowell, Mass.	19	15	4	-	-	-	-
Lynn, Mass.	15	12	3	-	-	-	1
New Bedford, Mass.	27	20	7	-	-	-	1
New Haven, Conn.	40	26	13	-	1	-	-
Providence, R.I.	64	41	16	1	1	5	3
Somerville, Mass.	8	6	2	-	-	-	-
Springfield, Mass.	35	21	12	2	-	-	5
Waterbury, Conn.	32	27	5	-	-	-	3
Worcester, Mass.	56	47	5	-	3	1	7
MID. ATLANTIC	2,474	1,604	545	168	61	95	82
Albany, N.Y.	45	31	7	5	-	2	-
Allentown, Pa.	21	19	2	-	-	-	-
Buffalo, N.Y.	108	75	25	6	2	-	8
Camden, N.J.	27	17	8	1	1	-	-
Elizabeth, N.J.	29	20	8	1	-	-	-
Erie, Pa.†	46	30	12	4	-	-	1
Jersey City, N.J.	48	34	11	2	-	1	1
N.Y. City, N.Y.	1,284	834	274	102	35	39	37
Newark, N.J.	72	32	21	10	3	6	8
Paterson, N.J. §	31	25	-	2	1	2	1
Philadelphia, Pa.†	339	189	88	20	6	36	13
Pittsburgh, Pa.†	55	40	13	-	1	1	-
Reading, Pa.	37	31	5	-	1	-	-
Rochester, N.Y.	124	82	27	5	8	2	8
Schenectady, N.Y.	30	20	6	4	-	-	1
Scranton, Pa.†	32	24	5	2	1	-	2
Syracuse, N.Y.	70	46	17	1	2	4	1
Trenton, N.J.	31	21	9	1	-	-	-
Utica, N.Y.	26	19	6	1	-	-	-
Yonkers, N.Y.	19	15	1	1	-	2	1
E.N. CENTRAL	1,947	1,232	447	137	63	63	53
Akron, Ohio	54	36	13	-	2	3	-
Canton, Ohio	35	23	7	4	-	1	1
Chicago, Ill.	490	304	113	37	14	22	10
Cincinnati, Ohio	137	87	37	4	5	4	7
Cleveland, Ohio	132	74	34	14	7	3	1
Columbus, Ohio	96	53	24	5	7	7	1
Dayton, Ohio	84	56	18	6	4	-	1
Detroit, Mich.	217	134	45	20	7	7	14
Evansville, Ind.	43	32	6	3	1	1	-
Fort Wayne, Ind.	32	20	10	-	1	1	2
Gary, Ind.	8	4	4	-	-	-	2
Grand Rapids, Mich.	56	33	18	2	-	3	-
Indianapolis, Ind.	120	73	30	11	3	3	-
Madison, Wis.	38	21	9	5	2	1	4
Milwaukee, Wis.	126	84	29	8	4	1	1
Peoria, Ill.	41	24	8	5	1	3	3
Rockford, Ill.	38	29	4	4	1	-	3
South Bend, Ind.	44	35	8	-	1	-	2
Toledo, Ohio	91	68	15	4	2	2	1
Youngstown, Ohio	65	47	11	5	1	1	-
W.N. CENTRAL	586	380	124	38	17	27	33
Des Moines, Iowa	53	39	11	1	2	-	1
Duluth, Minn.	25	20	3	-	1	1	1
Kansas City, Kans.	20	10	6	2	-	2	-
Kansas City, Mo.	102	64	21	6	4	7	6
Lincoln, Nebr.	23	17	5	-	-	1	3
Minneapolis, Minn.	82	52	20	4	2	4	2
Omaha, Nebr.	58	34	13	7	1	3	2
St. Louis, Mo.	127	79	27	11	4	6	12
St. Paul, Minn.	39	27	7	2	1	2	2
Wichita, Kans.	57	38	11	5	2	1	4

REPORTING AREA	ALL CAUSES, BY AGE (YEARS) ALL AGES	>65	45-64	25-44	1-24	<1	P&I** TOTAL
S. ATLANTIC	982	584	247	76	35	40	41
Atlanta, Ga.	118	75	27	12	3	1	7
Baltimore, Md.	97	65	18	8	4	2	2
Charlotte, N.C.	61	36	17	3	3	2	4
Jacksonville, Fla.	85	57	17	5	2	4	2
Miami, Fla.	102	54	32	12	3	1	3
Norfolk, Va.	47	25	11	4	1	6	5
Richmond, Va.	70	35	23	5	2	5	5
Savannah, Ga.	39	16	15	2	1	5	-
St. Petersburg, Fla.	72	60	11	-	-	1	3
Tampa, Fla.	62	35	12	8	3	4	5
Washington, D.C.	192	100	56	14	13	9	4
Wilmington, Del.	37	26	8	3	-	-	1
E.S. CENTRAL	707	414	186	45	37	25	32
Birmingham, Ala.	124	66	39	8	6	5	8
Chattanooga, Tenn.	32	18	10	1	1	2	1
Knoxville, Tenn.	33	22	8	2	1	-	-
Louisville, Ky.	116	73	31	8	4	-	9
Memphis, Tenn.	205	113	48	14	19	11	6
Mobile, Ala.	56	31	17	1	3	4	1
Montgomery, Ala.	29	22	3	2	2	-	1
Nashville, Tenn.	112	69	30	9	1	3	6
W.S. CENTRAL	1,059	571	263	115	66	40	24
Austin, Tex.	65	41	13	5	5	1	3
Baton Rouge, La.	28	16	9	3	-	-	-
Corpus Christi, Tex.	31	17	7	3	4	-	-
Dallas, Tex.	164	76	43	21	14	10	-
El Paso, Tex.	56	29	15	9	2	1	3
Fort Worth, Tex.	47	26	12	4	3	2	5
Houston, Tex.	287	127	87	40	17	16	6
Little Rock, Ark.	47	31	13	1	1	1	-
New Orleans, La.	99	60	18	11	6	4	1
San Antonio, Tex.	109	65	24	13	4	3	2
Shreveport, La.	54	36	8	6	4	-	3
Tulsa, Okla.	72	47	10	7	6	2	1
MOUNTAIN	492	288	124	37	24	18	14
Albuquerque, N.Mex.	26	19	5	1	1	-	1
Colo. Springs, Colo.	36	20	12	2	1	1	2
Denver, Colo.	101	58	28	9	3	3	1
Las Vegas, Nev.	85	36	26	13	7	3	-
Ogden, Utah	21	18	3	-	-	-	3
Phoenix, Ariz.	99	65	20	5	4	4	-
Pueblo, Colo.	19	12	6	-	1	-	-
Salt Lake City, Utah	45	24	10	4	3	4	1
Tucson, Ariz.	60	36	14	3	4	3	6
PACIFIC	1,318	867	272	88	45	48	82
Berkeley, Calif.	30	21	5	2	-	2	1
Fresno, Calif.	57	42	6	2	4	3	5
Glendale, Calif.	6	5	1	-	-	-	-
Honolulu, Hawaii	56	34	14	6	2	-	6
Long Beach, Calif.	84	55	18	6	-	5	3
Los Angeles, Calif.	254	156	58	15	11	10	9
Oakland, Calif.	65	41	10	7	2	5	3
Pasadena, Calif.	25	16	8	-	-	1	1
Portland, Oreg.	112	82	21	5	3	1	10
Sacramento, Calif.	67	39	17	4	3	4	7
San Diego, Calif.	94	58	20	3	6	7	7
San Francisco, Calif.	134	99	27	7	-	1	2
San Jose, Calif.	167	103	34	17	10	3	21
Seattle, Wash.	94	63	20	7	2	2	4
Spokane, Wash.	49	32	11	-	2	4	2
Tacoma, Wash.	24	21	2	1	-	-	1
TOTAL	10,177††	6,358	2,354	727	365	371	413

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality January 1982		Estimated number of physician contacts January 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	174,450	891.1	102,095,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	7,770	39.7	5,032,000
Malignant neoplasms (140-208)	1,804,120	35,430	181.0	2,991,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	69,380	354.4	6,127,000
Suicides, homicides (E950-E978)	1,401,880	3,900	19.9	–
Chronic liver disease and cirrhosis (571)	301,070	2,330	11.9	174,000
Cerebrovascular diseases (430-438)	280,430	15,370	78.5	728,000
Pneumonia and influenza (480-487)	124,830	4,660	23.8	1,166,000
Diabetes mellitus (250)	117,340	2,800	14.3	2,749,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	4,740	24.2	1,805,000
Prenatal care[5]				2,220,000
Infant mortality[5]		3,600	11.6/1,000 live births	

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[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the midpoint of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 2, May 12, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 1, April 16, 1982, p. 1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 2, May 12, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, January 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 31, No. 1, April 16, 1982, p. 1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Kaposi's Sarcoma — Continued

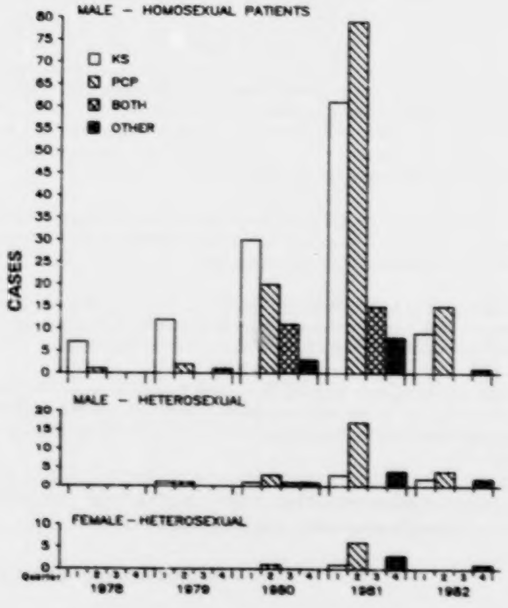
pneumonia (PCP), occurring in previously healthy persons between 15 and 60 years of age. Of the 355, 281 (79%) were homosexual (or bisexual) men, 41 (12%) were heterosexual men, 20 (6%) were men of unknown sexual orientation, and 13 (4%) were heterosexual women. This proportion of heterosexuals (16%) is higher than previously described (*1*).

Five states—California, Florida, New Jersey, New York, and Texas—accounted for 86% of the reported cases. The rest were reported by 15 other states. New York was reported as the state of residence for 51% of homosexual male patients, 49% of the heterosexual males, and 46% of the females. The median age at onset of symptoms was 36.0 years for homosexual men, 31.5 years for heterosexual men, and 29.0 years for women. The distribution of homosexual and heterosexual KSOI cases by date of onset is shown in Figure 2. Overall, 69% of all reported cases have had onset after January 1, 1981.

PCP accounted for a significantly higher proportion of the diagnoses for both male (63%) and female (73%) heterosexual patients than for homosexual patients (42%) ($p<0.05$). The ratio of homosexual to heterosexual males with PCP only, by year of onset of symptoms, was 5:1 in 1980, 3:1 in 1981 and 4:1 thus far in 1982. Reported case-fatality ratios for PCP cases with onset in 1980 and 1981 were 85% and 47%, respectively, for homosexual men and 67% and 41% for heterosexual men. The distribution of PCP cases by diagnosis, sexual orientation, race, and overall case-fatality ratio is shown in Table 1.

Both male and female heterosexual PCP patients were more likely than homosexual patients to be black or Hispanic ($p=0.0001$). Of patients with PCP for whom drug-use information was known, 14% of homosexual men had used intravenous drugs at some time compared with 63% of heterosexual men ($p=0.001$) and 57% of heterosexual women ($p=0.001$)(Table 1).

FIGURE 2. Cases of KSOI by specific diagnosis, year of onset, sex, and sexual orientation, United States, 1978-1982



Kaposi's Sarcoma — Continued

Reported by Task Force on Kaposi's Sarcoma and Opportunistic Infections, Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: Sexual orientation information was obtained from patients by their physicians, and the accuracy of reporting cannot be determined; therefore, comparisons between KSOI cases made on the basis of sexual orientation must be interpreted cautiously. Similarities between homosexual and heterosexual cases in diagnoses and geographic and temporal distribution suggest that all are part of the same epidemic. Masur et al (*2*) also reported that lymphocyte dysfunction and lymphopenia were similar in heterosexual and homosexual cases of PCP. However, differences in race, proportion of PCP cases, and intravenous drug use suggest that risk factors may be different for these groups. A laboratory and interview study of heterosexual patients with diagnosed KS, PCP, or other OI is in progress to determine whether their cellular immune function, results of virologic studies, medical history, sexual practices, drug use, and life-style are similar to those of homosexual patients.

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1. CDC. Follow-up on Kaposi's sarcoma and *Pneumocystis* pneumonia. MMWR 1981;30:409-10.
2. Masur H, Michelis M, Greene JB, *et al.* An outbreak of community-acquired *Pneumocystis carinii* pneumonia: initial manifestations of cellular immune dysfunction. N Engl J Med 1981;305:1431-8.

TABLE 1. Reported cases of *Pneumocystis carinii* pneumonia in previously healthy persons, June 1, 1981-May 28, 1982, United States

	Race					
	Total	**White**	**Black**	**Hispanic**	**Case-fatality ratio**	**IV-Drug Use†**
Homosexual men*	118	80	22	15	51%	11/80 (14%)
Heterosexual men*	26	8	11	6	35%	17/26 (65%)
Heterosexual women*	8	1	4	2	50%	4/7 (57%)

*Race data lacking for 1 case

†Data not available on all cases

Recommendation of the Immunization Practices Advisory Committee (ACIP)

Plague Vaccine

These revised ACIP recommendations on plague vaccine represent an update of the previous recommendations (MMWR 1978;27:255-8) to include current information and practices.

INTRODUCTION

Plague is a natural infection of rodents and their ectoparasites and occurs in many parts of the world, including the western United States. In this country, a few human cases develop each year following exposure to infected wild rodents or their fleas and, less commonly, to other infected wild animals (bobcats, coyotes, rabbits) and domestic animals (cats, dogs). Epidemic plague may result when domestic rat populations and their fleas become infected. Recently, the areas of the most intensive epidemic and epizootic infection have been some countries in Africa, Asia, and South America.

Plague Vaccine – Continued

General Recommendations

Because human plague is rare in most parts of the world, there is no need to vaccinate persons other than those at particularly high risk of exposure. Routine vaccination is not necessary for persons living in areas with enzootic plague such as the western United States. It is not indicated for most travelers to countries reporting cases,* particularly if their travel is limited to urban areas with modern hotel accommodations.

Many plague patients in the western United States are infected as a direct result of wild-rodent plague in the immediate vicinity of their homes. Recommended risk-reduction measures include eliminating wild-rodent harborage and food sources near homes, ridding pet dogs and cats of fleas at least weekly, and avoiding direct contact with sick or dead rodents.

In most countries of Africa, Asia, and South America where plague is reported, the risk of exposure exists primarily in rural mountainous or upland areas. Following natural disasters and at times when regular sanitary practices are interrupted, plague can extend from its usual areas of endemicity into urban centers. Rarely, pneumonic plague has been reported in conjunction with outbreaks of bubonic plague, and tourist travel to areas with reported cases of plague should be avoided.

Routine bacteriologic precautions, including the use of a biological safety cabinet to isolate procedures that may produce aerosols, are sufficient to prevent accidental infection with plague among clinical laboratory workers. Few laboratory-associated cases have ever been reported, and these almost exclusively occurred at plague research laboratories or involved unusual exposures. Vaccination of clinical laboratory workers is not indicated.

Ecologists and other field workers who might come in contact with wild animals and their ectoparasites in areas where plague has been known to occur should be made aware of the potential risks of plague and told how to minimize direct contact with potentially infective animals and their tissues or parasites. These precautionary measures are generally sufficient to prevent infection.

PLAGUE VACCINE

Plague vaccines† have been used since the late 19th century, but their effectiveness has never been measured precisely. Field experience indicates that vaccination with plague vaccine reduces the incidence and severity of disease resulting from the bite of infected fleas. The degree of protection afforded against primary pneumonic infection is not known. Persons exposed to plague patients who have pneumonia or to *Yersinia pestis*‡ aerosols in the laboratory should be given a 7- to 10-day course of antimicrobic therapy regardless of vaccination history. Recommended antimicrobials include tetracyclines, chloramphenicol, or streptomycin.

The plague vaccine licensed for use in the United States is prepared from *Y. pestis* organisms grown in artificial media, inactivated with formaldehyde, and preserved in 0.5% phenol. The vaccine contains trace amounts of beef-heart extract, yeast extract, agar, and peptones and peptides of soya and casein.

Serum antibody to Fraction I capsular antigen, as measured by the passive hemagglutination (PHA) test, is correlated with resistance to *Y. pestis* infection in experimental animals. A comparable correlation between PHA titer and immunity probably occurs in humans.

Following the primary series of 3 injections, about 7% of individuals do not produce PHA

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*For a current listing, consult the most recent issue of the World Health Organization's *Weekly Epidemiological Record*; current information is also available from the Quarantine Division, Center for Prevention Services, Centers for Disease Control, Atlanta, Georgia 30333.

†Official name: Plague Vaccine

‡The designation *Yersinia pestis* is used advisedly since there is reportedly a recommendation by the International Committee on Systematic Bacteriology to reclassify this organism as *Yersinia pseudotuberculosis* ssp. *pestis* (WHO. Weekly Epidemiological Record 1981;56:399).

Plague Vaccine – Continued

antibody, and a few fail to develop a titer of 128, the level correlated with immunity in experimental animals. PHA titers should be determined for individuals who have an unusually high risk of infection or who have a history of serious reactions to the vaccine in order to govern the frequency of booster doses. Such testing can be arranged through state health departments. Since plague vaccination may only ameliorate illness, whenever a vaccinated person has a definite exposure, prophylactic antibiotics may be indicated whether or not an antibody response has been demonstrated.

Vaccine Recipients

Vaccination is recommended for:

1) All laboratory and field personnel who are working with *Y. pestis* organisms resistant to antimicrobics, 2) Persons engaged in aerosol experiments with *Y. pestis* and 3) Persons engaged in field operations in areas with enzootic plague where preventing exposure is not possible (such as some disaster areas).

Selective plague vaccination should be considered for:

1) Laboratory personnel regularly working with *Y. pestis* or plague-infected rodents, 2) Workers (for example, Peace Corps volunteers and agricultural advisors) who reside in rural areas with enzootic or epidemic plague where avoidance of rodents and fleas is impossible, and 3) Persons whose vocation brings them into regular contact with wild rodents or rabbits in areas with enzootic plague.

Primary Vaccination

All injections should be given intramuscularly.

Adults and children ≥11 years old: The primary series consists of 3 doses of vaccine. The first dose, 1.0 ml, is followed by the second dose, 0.2 ml, 4 weeks later. The third dose, 0.2 ml, is administered 6 months after the first dose. If an accelerated schedule is essential, 3 doses of 0.5 ml each, administered at least 1 week apart, may be given. The efficacy of this schedule has not been determined.

Children ≥10 years old: The primary series is also 3 doses of vaccine, but the doses are smaller (Table 1). The intervals between injections are the same as for adults.

Booster Doses

When needed because of continuing exposure, 3 booster doses should be given at approximately 6-month intervals. Thereafter, antibody levels decline slowly and booster doses at 1- to 2-year intervals, depending on the degree of continuing exposure, should provide good protection.

The recommended booster dosages for children and adults are the same as the second and third doses in the primary series. However, if serious side effects to the vaccine occur, their severity may be reduced by using half the usual dose. The primary series need never be repeated for booster doses to be effective (Table 2).

SIDE EFFECTS OF VACCINE

Primary vaccination may result in general malaise, headache, fever, mild lymphadenopathy, and erythema and induration at the injection site in about 10% of recipients. These reactions occur more commonly with repeated injections. Sterile abscesses occur rarely. Rare cases of sensitivity reactions manifested by urticarial and asthmatic phenomena have been reported.

PRECAUTIONS AND CONTRAINDICATIONS

Plague vaccine should not be administered to anyone with a known hypersensitivity to any of the constituents such as beef protein, soya, casein, and phenol. Patients who have had severe local or systemic reactions to plague vaccine should not be revaccinated.

The safety or efficacy of vaccination with plague vaccine during pregnancy has not been determined, and therefore it should not be used unless there is a substantial risk of infection.

Plague Vaccine – Continued

TABLE 2. Plague vaccine doses (in milliliters), by age group (in years), for primary and booster vaccinations*

Dose number	<1	1-4	5-10	>11
1	0.2	0.4	0.6	1.0
2 & 3	0.04	0.08	0.12	0.2
Boosters†	0.02-0.04	0.04-0.08	0.06-0.12	0.1-0.2

*Important details are in the text.

†Smaller dose volume may be used if severe side effects are expected.

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International Notes

Poliomyelitis — Jamaica

An outbreak of poliomyelitis has been reported to the Pan American Health Organization by the Ministry of Health, Jamaica, occurring in the Cornwall Region. A total of 35 suspected cases and 1 death have been identified to date. All cases have been reported from a single referral hospital in Montego Bay, St. James Parish. Age data were available for 27 of the 35 patients. The age range for these 27 patients is 8 months to 24 years. Twenty-three of the 27 cases involved persons <7 years of age. Poliovirus Type I has been isolated from 8 of these cases. Epidemiologic investigation and large scale control efforts are underway, including mass vaccination beginning with the school-age population.

Reported by Pan American Health Organization; Viral Diseases Div, Center for Infectious Diseases, Immunization Div, Center for Prevention Svcs, CDC.

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Epidemiologic Notes and Reports

A Cluster of Kaposi's Sarcoma and *Pneumocystis carinii* Pneumonia among Homosexual Male Residents of Los Angeles and Orange Counties, California

In the period June 1, 1981-April 12, 1982, CDC received reports of 19 cases of biopsy-confirmed Kaposi's sarcoma (KS) and/or *Pneumocystis carinii* pneumonia (PCP) among previously healthy homosexual male residents of Los Angeles and Orange counties, California. Following an unconfirmed report of possible associations among cases in southern California, interviews were conducted with all 8 of the patients still living and with the close friends of 7 of the other 11 patients who had died.

Data on sexual partners were obtained for 13 patients, 8 with KS and 5 with PCP. For any patient to be considered as a sexual contact of another person, the reported exposures of that patient had to be either substantiated or not denied by the other person involved in the relationship (or by a close friend of that person).

Within 5 years of the onset of symptoms, 9 patients (6 with KS and 3 with PCP) had had sexual contact with other patients with KS or PCP. Seven patients from Los Angeles County had had sexual contact with other patients from Los Angeles County, and 2 from Orange County had had sexual contact with 1 patient who was not a resident of California. Four of the 9 patients had been exposed to more than 1 patient who had KS or PCP. Three of the 6 patients with KS developed their symptoms after sexual contact with persons who already had symptoms of KS. One of these 3 patients developed symptoms of KS 9 months after sexual contact, another patient developed symptoms 13 months after contact, and a third patient developed symptoms 22 months after contact.

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Kaposi's Sarcoma – Continued

The other 4 patients in the group of 13 had no known sexual contact with reported cases. However, 1 patient with KS had an apparently healthy sexual partner in common with 2 persons with PCP; 1 patient with KS reported having had sexual contact with 2 friends of the non-Californian with KS; and 2 patients with PCP had most of their anonymous contacts (≥80%) with persons in bathhouses attended frequently by other persons in Los Angeles with KS or PCP.

The 9 patients from Los Angeles and Orange counties directly linked to other patients are part of an interconnected series of cases that may include 15 additional patients (11 with KS and 4 with PCP) from 8 other cities. The non-Californian with KS mentioned earlier is part of this series. In addition to having had sexual contact with 2 patients with KS from Orange County, this patient said he had sexual contact with 1 patient with KS and 1 patient with PCP from New York City and 2 of the 3 patients with PCP from Los Angeles County.

Reported by S Fannin, MD, County of Los Angeles Dept of Health Svcs, MS Gottlieb, MD, UCLA School of Medicine, JD Weisman, DO, E Rogolsky, MD, Los Angeles, T Prendergast, MD, County of Orange Dept of Public Health and Medical Svcs, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; AE Friedman-Kien, MD, L Laubenstein, MD, New York University Medical Center, S Friedman, MD, New York City Dept of Health, R Rothenberg, MD, State Epidemiologist, New York Health Dept; Task Force on Kaposi's Sarcoma and Opportunistic Infections, CDC.

Editorial Note: An estimated 185,000-415,000 homosexual males live in Los Angeles County.* Assuming that they had a median of 13.5 to 50 different sexual partners per year over the past 5 years,† the probability that 7 of 11 patients with KS or PCP would have sexual contact with any one of the other 16 reported patients in Los Angeles County would seem to be remote. The probability that 2 patients with KS living in different parts of Orange County would have sexual contact with the same non-Californian with KS would appear to be even lower. Thus, observations in Los Angeles and Orange counties imply the existence of an unexpected cluster of cases.

The cluster in Los Angeles and Orange counties was identified on the basis of sexual contact. One hypothesis consistent with the observations reported here is that infectious agents are being sexually transmitted among homosexually active males. Infectious agents not yet identified may cause the acquired cellular immunodeficiency that appears to underlie KS and/or PCP among homosexual males (*3-6*). If infectious agents cause these illnesses, sexual partners of patients may be at increased risk of developing KS and/or PCP.

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*Estimates of the homosexual male population are derived from Kinsey *et al.*(*1*) who reported that 8% of adult males are exclusively homosexual and that 18% have at least as much homosexual as heterosexual experience for at least 3 years between the ages of 16 and 55 years; and the U. S. Bureau of the Census, which reported that approximately 2,304,000 males between the ages of 18 and 64 years lived in Los Angeles County in 1980.

†Estimates of sexual activity are derived from data collected by Jay and Young (*2*), indicating that 130 homosexual male respondents in Los Angeles had a median of 13.5 different sexual partners in 1976, and from CDC data showing that 13 patients with KS and/or PCP in the Los Angeles area tended to report having more sexual partners in the year before onset of symptoms (median=50) than did homosexual males surveyed by Jay and Young.

Another hypothesis to be considered is that sexual contact with patients with KS or PCP does not lead directly to acquired cellular immunodeficiency, but simply indicates a certain style of life. The number of homosexually active males who share this lifestyle may be much smaller than the number of homosexual males in the general population.

Exposure to some substance (rather than an infectious agent) may eventually lead to immunodeficiency among a subset of the homosexual male population that shares a particular style of life. For example, Marmor et al. recently reported that exposure to amyl nitrite was associated with an increased risk of KS in New York City (*7*). Exposure to inhalant sexual stimulants, central-nervous-system stimulants, and a variety of other "street" drugs was common among males belonging to the cluster of cases of KS and PCP in Los Angeles and Orange counties.

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Current Trends

Impact of Diabetes Outpatient Education Program — Maine

Diabetes mellitus is an important cause of morbidity and mortality in the United States, affecting 2.4% (almost 6 million people) of the total population and resulting in a direct and indirect outlay of approximately 9.7 billion dollars/year(*1*). Maine has an estimated 27,000 diabetics, and in 1980 diabetes was the sole or a contributing cause for 788 deaths—7.3% of all deaths in the state that year. It is believed that the suffering and economic burden of this disease can be reduced by training persons

Diabetes – Continued

with diabetes extensively in proper self-care and that diabetes will eventually become a model for other chronic diseases in demonstrating the cost-effectiveness of preventive intervention.

An audit of the charts of 898 diabetic patients hospitalized in 1979 at 34 hospitals was conducted to determine the number of hospitalizations for diabetes control that could have been prevented if the patient had been better educated in self management of diabetes and to determine the number of patients whose hospital stay was extended solely for education concerning diabetes. A total of 16.5% of the admissions were found to have been caused by lack of knowledge of self-management skills, and 10.3% had their length of stay extended only for diabetes education. An additional 19.9% were readmissions within the year for the same or similar problems.

The Maine Diabetes Control Project (DCP) established educational sites throughout the state in 1980 to provide improved opportunities for diabetes education and to document the effect of intensive education on diabetes-related morbidity and its

(Continued on page 313)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		23rd WEEK ENDING			CUMULATIVE, FIRST 23 WEEKS		
		June 12 1982	June 13 1981	MEDIAN 1977-1981	June 12 1982	June 13 1981	MEDIAN 1977-1981
Aseptic meningitis		123	101	77	1,743	1,624	1,167
Brucellosis		11	5	1	64	60	75
Encephalitis:	Primary (arthropod-borne & unspec.)	15	17	16	325	312	274
	Post-infectious	5	1	7	33	43	90
Gonorrhea:	Civilian	18,557	19,585	18,307	395,371	429,036	412,210
	Military	597	674	674	11,752	12,826	11,965
Hepatitis:	Type A	342	445	511	9,608	11,186	12,589
	Type B	350	405	345	8,894	8,682	7,227
	Non A, Non B	53	N	N	937	N	N
	Unspecified	165	192	192	3,946	4,838	4,413
Legionellosis		4	N	N	172	N	N
Leprosy		2	2	3	84	100	76
Malaria		34	17	17	383	563	243
Measles (rubeola)		70	171	608	779	2,110	10,267
Meningococcal infections:	Total	82	61	52	1,599	1,979	1,445
	Civilian	82	59	52	1,593	1,971	1,430
	Military	–	2	–	6	8	10
Mumps		75	176	279	3,471	2,528	9,071
Pertussis		13	25	19	457	456	473
Rubella (German measles)		84	52	337	1,503	1,380	8,852
Syphilis (Primary & Secondary):	Civilian	501	640	394	14,274	13,218	10,576
	Military	2	9	6	169	165	137
Tuberculosis		572	613	592	11,243	11,558	11,887
Tularemia		9	8	4	56	73	56
Typhoid fever		10	7	8	161	203	191
Typhus fever, tick-borne (RMSF)		60	68	52	245	346	223
Rabies, animal		110	176	103	2,692	3,366	2,107

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	2
Botulism (Kans. 1, Oreg. 3)	33	Paralytic (Iowa 1)	2
Cholera	–	Psittacosis (Minn. 1, Ala. 1, Tex. 1, Calif. 1)	51
Congenital rubella syndrome	5	Rabies, human	–
Diphtheria	–	Tetanus (Nebr. 1, Md. 1, Okla. 1)	32
Leptospirosis (Tex. 1)	28	Trichinosis (Ups N.Y. 1, N.J. 1, Calif. 1)	53
Plague	4	Typhus fever, flea-borne (endemic, murine) (Tex. 2)	11

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending June 12, 1982 and June 13, 1981 (23rd week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	123	64	325	33	395,371	429,036	342	350	53	165	4	84
NEW ENGLAND	2	3	15	4	9,707	10,569	8	21	–	7	–	1
Maine	–	–	–	–	443	536	–	1	–	–	–	–
N.H.	1	–	–	–	289	364	–	–	–	–	–	–
Vt.	1	–	–	–	196	186	–	–	–	–	–	–
Mass.	–	–	5	–	4,526	4,333	3	10	–	6	–	–
R.I.	–	–	–	–	661	524	3	1	–	–	–	–
Conn.	–	3	10	4	3,592	4,626	2	9	–	1	–	1
MID. ATLANTIC	20	–	46	9	49,780	50,302	29	43	7	20	3	4
Upstate N.Y.	18	–	17	3	8,026	8,346	4	8	3	4	–	1
N.Y. City	1	–	9	–	21,083	20,554	9	3	–	3	–	1
N.J.	–	–	10	–	8,884	9,840	16	32	4	13	1	1
Pa.	1	–	10	6	11,787	11,562	U	U	U	U	2	1
E.N. CENTRAL	10	–	66	6	53,131	67,333	41	33	2	13	–	2
Ohio	2	–	21	4	16,317	23,262	21	13	2	3	–	–
Ind.	2	–	15	2	6,416	6,241	7	8	–	8	–	–
Ill.	–	–	–	–	11,335	18,258	1	–	–	–	–	2
Mich.	5	–	28	–	13,706	13,857	7	10	–	2	–	–
Wis.	1	–	2	–	5,357	5,715	5	2	–	–	–	–
W.N. CENTRAL	2	6	17	3	19,125	20,111	8	9	2	1	–	1
Minn.	–	–	2	1	2,849	3,280	2	1	–	–	–	–
Iowa	2	1	5	1	2,059	2,070	1	2	–	–	–	–
Mo.	–	2	6	–	8,768	9,080	4	3	1	1	–	1
N. Dak.	–	–	–	–	267	288	–	1	–	–	–	–
S. Dak.	–	1	–	1	538	571	–	–	–	–	–	–
Nebr.	–	–	1	–	1,223	1,584	–	1	–	–	–	–
Kans.	–	2	1	–	3,421	3,238	1	1	1	–	–	–
S. ATLANTIC	26	15	49	6	95,506	105,368	51	77	11	15	–	5
Del.	–	–	–	–	1,620	1,589	–	5	–	–	–	–
Md.	–	–	11	–	13,302	11,608	5	13	1	2	–	2
D.C.	–	–	–	–	5,604	6,660	2	3	–	–	–	–
Va.	1	6	11	1	9,066	9,592	2	5	–	–	–	1
W. Va.	–	–	–	–	1,184	1,592	1	–	–	–	–	–
N.C.	3	–	4	1	16,730	16,430	9	13	–	4	–	–
S.C.	1	2	–	–	10,060	9,883	6	5	1	2	–	–
Ga.	3	1	–	–	9,483	21,378	4	12	1	–	–	–
Fla.	18	6	23	4	28,457	26,636	22	21	8	7	–	2
E.S. CENTRAL	1	7	18	1	34,715	35,470	15	14	3	1	–	–
Ky.	–	–	–	–	4,647	4,461	2	2	1	–	–	–
Tenn.	–	4	10	–	13,245	13,285	5	4	1	–	–	–
Ala.	1	2	5	1	10,670	11,158	1	4	1	1	–	–
Miss.	–	1	3	–	6,153	6,566	7	4	–	–	–	–
W.S. CENTRAL	16	18	34	–	57,577	56,418	58	47	2	51	1	9
Ark.	–	4	1	–	4,755	3,882	2	3	1	2	–	–
La.	4	2	4	–	10,482	9,273	16	11	–	4	–	–
Okla.	4	3	10	–	6,187	5,997	5	12	1	5	1	–
Tex.	8	9	19	–	36,153	37,266	35	21	–	40	–	9
MOUNTAIN	5	–	17	1	14,353	16,824	47	7	4	14	–	2
Mont.	1	–	–	–	597	577	1	2	–	–	–	–
Idaho	–	–	–	–	674	702	1	–	–	–	–	1
Wyo.	–	–	–	–	408	387	1	–	–	2	–	–
Colo.	3	–	7	1	3,792	4,549	4	1	1	–	–	–
N. Mex.	–	–	–	–	1,771	1,837	13	1	2	4	–	–
Ariz.	1	–	6	–	3,951	5,247	17	3	–	6	–	–
Utah	–	–	–	–	656	803	6	–	–	–	–	1
Nev.	–	–	4	–	2,504	2,722	4	–	1	2	–	–
PACIFIC	41	15	63	3	61,477	66,641	85	99	22	43	–	60
Wash.	1	–	6	–	5,054	5,676	7	5	5	4	–	6
Oreg.	–	–	1	–	3,404	4,282	12	8	3	–	–	–
Calif.	34	14	52	3	50,380	53,681	65	86	14	38	–	34
Alaska	1	1	3	–	1,556	1,694	–	–	–	–	–	1
Hawaii	5	–	1	–	1,083	1,308	1	–	–	1	–	19
Guam	U	–	–	–	33	63	U	U	U	U	U	–
P.R.	3	–	1	–	1,295	1,475	6	2	–	5	–	–
V.I.	–	–	–	–	72	72	–	–	–	–	–	–
Pac. Trust Terr.	U	–	–	–	36	188	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 12, 1982 and June 13, 1981 (23rd week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	34	383	70	779	2,110	82	1,599	75	3,471	13	84	1,503	1,380
NEW ENGLAND	–	21	–	8	72	1	85	1	143	–	2	14	101
Maine	–	–	–	–	5	–	3	–	32	–	–	–	33
N.H.	–	–	–	1	6	1	12	–	12	–	–	8	42
Vt.	–	–	–	2	2	–	4	–	5	–	–	–	–
Mass.	–	16	–	2	51	–	22	–	70	–	2	3	16
R.I.	–	1	–	–	–	–	11	1	12	–	–	1	–
Conn.	–	4	–	3	8	–	33	–	12	–	–	2	10
MID. ATLANTIC	10	51	21	116	688	34	291	4	220	4	3	76	163
Upstate N.Y.	4	14	19	85	187	29	93	2	42	4	3	37	68
N.Y. City	–	15	2	23	48	–	50	–	34	–	–	26	44
N.J.	4	15	–	4	49	–	53	1	32	–	–	13	43
Pa.	2	7	–	4	404	5	95	1	112	–	–	–	8
E.N. CENTRAL	1	25	10	43	72	7	191	40	1,965	8	7	135	294
Ohio	–	7	–	–	15	–	76	13	1,455	8	–	–	–
Ind.	–	1	–	2	8	2	17	3	33	–	4	24	98
Ill.	–	3	1	16	21	2	48	7	137	–	–	49	68
Mich.	1	12	9	25	27	3	39	13	265	–	–	42	31
Wis.	–	2	–	–	1	–	11	4	75	–	3	20	97
W.N. CENTRAL	1	10	–	31	6	3	68	1	394	–	–	54	72
Minn.	–	–	–	–	2	1	14	–	280	–	–	5	7
Iowa	1	4	–	–	1	–	5	1	29	–	–	–	3
Mo.	–	3	–	2	1	–	20	–	13	–	–	38	2
N. Dak.	–	–	–	–	–	1	6	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	3	–	1	–	–	1	–
Nebr.	–	2	–	–	1	1	9	–	–	–	–	–	1
Kans.	–	1	–	29	1	–	11	–	71	–	–	10	59
S. ATLANTIC	3	56	–	32	311	9	321	4	201	–	5	57	109
Del.	–	–	–	–	–	–	–	1	6	–	–	1	1
Md.	–	7	–	2	1	–	20	2	20	–	5	31	1
D.C.	–	3	–	1	1	–	2	–	–	–	–	–	–
Va.	1	22	–	14	6	1	34	–	30	–	–	8	3
W. Va.	–	2	–	1	7	–	7	–	80	–	–	1	19
N.C.	–	–	–	–	3	4	63	1	9	–	–	1	4
S.C.	–	3	–	–	–	1	38	–	11	–	–	1	7
Ga.	–	8	–	–	99	2	67	–	8	–	–	4	29
Fla.	2	11	–	14	194	1	90	–	37	–	–	10	45
E.S. CENTRAL	–	5	–	6	–	10	108	1	28	–	1	37	22
Ky.	–	4	–	1	–	4	18	–	9	–	1	21	13
Tenn.	–	–	–	4	–	2	41	–	11	–	–	–	8
Ala.	–	–	–	–	–	4	43	1	5	–	–	–	1
Miss.	–	1	–	1	–	–	6	–	3	–	–	16	–
W.S. CENTRAL	2	29	2	22	666	–	188	9	134	–	3	78	108
Ark.	–	3	–	–	1	–	11	–	6	–	–	–	2
La.	–	3	–	–	–	–	34	–	3	–	–	–	9
Okla.	–	3	–	–	5	–	16	–	–	–	–	3	–
Tex.	2	20	2	22	660	–	127	9	125	–	3	75	97
MOUNTAIN	1	9	5	5	28	–	80	–	52	1	3	49	67
Mont.	–	–	–	–	–	–	4	–	3	–	–	4	3
Idaho	–	–	–	–	1	–	6	–	3	1	–	–	2
Wyo.	–	–	–	–	–	–	4	–	2	–	–	5	1
Colo.	1	5	5	5	5	–	31	–	8	–	–	4	29
N. Mex.	–	2	–	–	8	–	11	–	–	–	–	4	5
Ariz.	–	1	–	–	4	–	14	–	23	–	–	7	17
Utah	–	1	–	–	–	–	7	–	11	–	3	16	3
Nev.	–	–	–	–	10	–	3	–	2	–	–	9	7
PACIFIC	16	177	32	516	267	18	267	15	334	–	60	1,003	444
Wash.	2	10	–	24	1	2	29	2	57	–	6	30	49
Oreg.	–	5	–	–	3	4	55	–	–	–	–	3	48
Calif.	14	160	32	488	261	12	171	13	265	–	54	962	342
Alaska	–	–	–	1	–	–	9	–	6	–	–	1	–
Hawaii	–	2	–	3	2	–	3	–	6	–	–	7	9
Guam	U	1	U	–	6	U	1	U	1	U	U	1	1
P.R.	–	4	1	63	193	–	5	2	39	–	–	4	3
V.I.	–	–	–	–	6	–	–	–	–	–	–	–	–
Pac. Trust Terr.	U	–	U	–	–	U	–	U	–	U	U	–	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 12, 1982 and June 13, 1981 (23rd week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	14,274	13,218	572	11,243	56	10	161	60	245	2,692
NEW ENGLAND	248	288	13	301	-	-	11	1	2	20
Maine	1	1	-	23	-	-	-	-	-	19
N.H	-	12	-	10	-	-	-	-	-	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	173	184	12	203	-	-	8	1	1	-
R.I.	12	16	-	11	-	-	-	-	1	-
Conn.	61	62	1	47	-	-	1	-	-	1
MID. ATLANTIC	1,952	1,973	75	1,867	6	-	24	3	6	63
Upstate N.Y.	207	175	-	318	6	-	2	-	-	35
N.Y. City	1,173	1,202	22	690	-	-	17	-	-	-
N.J.	249	262	11	372	-	-	3	3	5	1
Pa.	323	334	42	487	-	-	2	-	1	27
E.N. CENTRAL	724	936	74	1,694	-	1	14	5	23	300
Ohio	136	119	13	285	-	-	6	5	22	47
Ind.	93	98	19	224	-	-	-	-	-	43
Ill.	317	511	29	671	-	-	3	-	1	141
Mich.	128	162	13	424	-	1	5	-	-	2
Wis.	50	46	-	90	-	-	-	-	-	67
W.N. CENTRAL	282	264	13	339	8	2	6	-	4	591
Minn.	54	95	4	57	-	2	3	-	-	91
Iowa	14	13	2	45	1	-	1	-	-	183
Mo.	170	131	6	155	5	-	1	-	2	61
N. Dak.	4	6	-	6	-	-	-	-	-	56
S. Dak.	-	2	-	13	-	-	-	-	-	47
Nebr.	8	3	-	15	-	-	-	-	-	72
Kans.	32	14	1	48	2	-	1	-	2	81
S. ATLANTIC	3,957	3,483	135	2,301	7	1	23	37	140	432
Del.	8	7	-	25	-	-	-	-	-	-
Md.	224	275	19	278	1	-	6	3	18	21
D.C.	243	296	9	92	-	-	-	-	-	-
Va.	278	326	21	263	1	-	2	1	12	212
W. Va.	14	9	2	69	-	-	2	-	3	20
N.C.	278	266	28	366	-	-	-	14	61	25
S.C.	195	241	17	234	4	1	3	11	35	25
Ga.	815	890	-	327	-	-	-	7	10	97
Fla.	1,902	1,173	39	667	1	-	10	1	1	32
E.S. CENTRAL	1,002	870	71	1,062	6	-	11	1	12	336
Ky.	56	43	14	271	-	-	-	-	-	65
Tenn.	269	349	24	367	4	-	2	1	7	222
Ala.	353	233	21	296	-	-	7	-	3	49
Miss.	324	245	12	128	2	-	2	-	2	-
W.S. CENTRAL	3,638	3,177	91	1,319	21	1	13	13	54	561
Ark.	94	63	6	123	13	-	1	1	7	75
La.	792	734	10	233	1	-	-	-	-	16
Okla.	77	79	22	194	7	-	2	7	27	110
Tex.	2,675	2,301	53	769	-	1	10	5	20	360
MOUNTAIN	360	322	14	328	4	-	6	-	3	89
Mont.	3	8	-	25	-	-	-	-	-	36
Idaho	18	8	-	13	1	-	-	-	1	1
Wyo.	10	5	-	2	1	-	-	-	1	5
Colo.	101	102	3	42	-	-	2	-	-	8
N. Mex.	76	67	-	60	-	-	-	-	1	10
Ariz.	87	69	8	133	-	-	3	-	-	26
Utah	11	11	2	17	2	-	1	-	-	1
Nev.	54	52	1	36	-	-	-	-	-	2
PACIFIC	2,111	1,905	86	2,052	4	5	53	-	1	300
Wash.	69	66	8	120	1	1	3	-	-	-
Oreg.	58	43	-	75	-	-	1	-	-	-
Calif.	1,920	1,754	75	1,668	3	4	48	-	1	231
Alaska	7	6	-	32	-	-	-	-	-	69
Hawaii	57	36	3	157	-	-	1	-	-	-
Guam	1	-	U	2	-	U	-	U	-	-
P.R.	273	308	-	140	-	-	1	-	-	24
V.I.	6	4	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending June 12, 1982 (23rd week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	597	401	144	25	7	20	50
Boston, Mass.	178	113	45	9	1	10	25
Bridgeport, Conn.	37	28	7	2	–	–	3
Cambridge, Mass.	21	17	4	–	–	–	2
Fall River, Mass.	34	26	8	–	–	–	–
Hartford, Conn.	39	27	9	2	1	–	–
Lowell, Mass.	22	16	6	–	–	–	1
Lynn, Mass.	23	16	6	1	–	–	1
New Bedford, Mass.	26	20	5	–	–	1	2
New Haven, Conn.	43	22	15	2	2	2	1
Providence, R.I.	55	31	17	2	1	4	8
Somerville, Mass.	7	6	–	1	–	–	–
Springfield, Mass.	39	29	7	–	1	2	1
Waterbury, Conn.	28	22	3	2	1	–	1
Worcester, Mass.	45	28	12	4	–	1	5
MID. ATLANTIC	2,380	1,553	543	158	70	56	66
Albany, N.Y.	59	41	8	4	3	3	1
Allentown, Pa.	20	16	4	–	–	–	–
Buffalo, N.Y.	107	63	31	8	3	2	7
Camden, N.J.	44	21	18	2	1	2	1
Elizabeth, N.J.	20	17	2	1	–	–	–
Erie, Pa.†	50	32	14	2	–	2	1
Jersey City, N.J.	41	33	4	2	1	1	1
N.Y. City, N.Y.	1,232	790	285	94	40	23	29
Newark, N.J.	61	29	18	5	3	6	4
Paterson, N.J.	27	17	3	–	3	4	2
Philadelphia, Pa.†	307	196	71	25	6	9	8
Pittsburgh, Pa.†	61	39	20	–	1	1	–
Reading, Pa.	28	23	2	2	1	–	1
Rochester, N.Y.	115	80	25	5	5	–	3
Schenectady, N.Y.	14	11	1	2	–	–	1
Scranton, Pa.†	22	20	2	–	–	–	2
Syracuse, N.Y.	98	70	21	2	2	3	1
Trenton, N.J.	25	18	5	1	1	–	–
Utica, N.Y.	26	20	4	2	–	–	1
Yonkers, N.Y.	23	17	5	1	–	–	3
E.N. CENTRAL	2,330	1,433	583	153	79	82	65
Akron, Ohio	70	38	23	3	4	2	–
Canton, Ohio	33	24	6	1	1	1	2
Chicago, Ill.	522	313	125	39	21	24	13
Cincinnati, Ohio	137	85	38	7	3	4	7
Cleveland, Ohio	179	105	45	16	7	6	3
Columbus, Ohio	180	108	46	7	10	9	1
Dayton, Ohio	118	69	34	6	4	5	2
Detroit, Mich.	263	151	72	22	8	10	13
Evansville, Ind.	48	36	10	2	–	–	3
Fort Wayne, Ind.	60	35	15	5	2	3	6
Gary, Ind.	22	15	2	3	1	1	–
Grand Rapids, Mich.	59	37	14	3	2	3	1
Indianapolis, Ind.	174	103	41	16	6	8	3
Madison, Wis.	38	25	7	5	1	–	1
Milwaukee, Wis.	138	94	36	6	2	–	–
Peoria, Ill.	36	24	8	1	–	3	5
Rockford, Ill.	45	29	8	3	5	–	1
South Bend, Ind.	49	34	11	3	1	–	2
Toledo, Ohio	92	63	25	2	1	1	2
Youngstown, Ohio	67	45	17	3	–	2	–
W.N. CENTRAL	729	488	149	37	19	36	31
Des Moines, Iowa	53	38	8	2	2	3	–
Duluth, Minn.	39	31	6	–	–	2	3
Kansas City, Kans.	32	21	6	3	2	–	1
Kansas City, Mo.	99	60	27	5	–	7	5
Lincoln, Nebr.	41	27	10	2	–	2	1
Minneapolis, Minn.	89	62	14	4	4	5	2
Omaha, Nebr.	90	54	22	5	2	7	3
St. Louis, Mo.	159	107	32	11	7	2	10
St. Paul, Minn.	60	46	10	1	–	3	1
Wichita, Kans.	67	42	14	4	2	5	5
S. ATLANTIC	1,238	757	287	78	51	65	29
Atlanta, Ga.	116	73	28	13	1	1	1
Baltimore, Md.	248	149	56	15	14	14	4
Charlotte, N.C.	51	35	9	3	1	3	2
Jacksonville, Fla.	110	54	36	7	10	3	3
Miami, Fla.	78	51	15	4	2	6	1
Norfolk, Va.	50	32	10	3	2	3	1
Richmond, Va.	87	50	24	7	2	4	5
Savannah, Ga.	31	14	7	6	3	1	1
St. Petersburg, Fla.	112	94	14	1	1	2	2
Tampa, Fla.	93	62	21	2	5	3	3
Washington, D.C.	200	107	54	14	4	21	5
Wilmington, Del.	62	36	13	3	6	4	1
E.S. CENTRAL	707	435	162	47	31	32	26
Birmingham, Ala.	125	76	29	11	5	4	–
Chattanooga, Tenn.	66	40	15	6	4	1	4
Knoxville, Tenn.	30	19	8	2	–	1	1
Louisville, Ky.	103	59	25	7	6	6	7
Memphis, Tenn.	177	119	37	9	7	5	7
Mobile, Ala.	49	27	4	3	5	10	–
Montgomery, Ala.	52	31	13	5	1	2	1
Nashville, Tenn.	105	64	31	4	3	3	6
W.S. CENTRAL	1,260	770	302	105	53	30	29
Austin, Tex.	53	33	14	4	2	–	–
Baton Rouge, La.	73	48	14	6	5	–	1
Corpus Christi, Tex.	40	25	4	4	4	3	1
Dallas, Tex.	175	98	45	22	7	3	4
El Paso, Tex.	50	29	15	4	1	1	1
Fort Worth, Tex.	110	75	18	7	5	5	4
Houston, Tex.	252	127	75	37	11	2	3
Little Rock, Ark.	77	40	25	4	3	5	2
New Orleans, La.	107	66	26	4	8	3	3
San Antonio, Tex.	168	121	31	5	4	7	2
Shreveport, La.	46	32	12	1	1	–	2
Tulsa, Okla.	109	76	23	7	2	1	6
MOUNTAIN	706	422	163	52	32	37	29
Albuquerque, N. Mex.	106	55	30	16	3	2	2
Colo. Springs, Colo.	37	21	4	6	4	2	2
Denver, Colo.	137	85	24	7	7	14	2
Las Vegas, Nev.	96	50	27	8	8	3	5
Ogden, Utah	25	20	4	–	–	1	2
Phoenix, Ariz.	134	71	40	10	4	9	1
Pueblo, Colo.	19	13	4	–	2	–	1
Salt Lake City, Utah	48	28	10	2	2	6	3
Tucson, Ariz.	104	79	20	3	2	–	11
PACIFIC	1,729	1,131	389	116	43	50	100
Berkeley, Calif.	18	17	1	–	–	–	–
Fresno, Calif.	70	40	19	4	4	3	3
Glendale, Calif.	18	17	1	–	–	–	–
Honolulu, Hawaii	46	29	14	2	1	–	–
Long Beach, Calif.	93	62	23	4	2	2	–
Los Angeles, Calif.	420	273	97	26	12	12	20
Oakland, Calif.	86	55	22	6	1	2	4
Pasadena, Calif.	26	18	8	–	–	–	4
Portland, Oreg.	134	94	26	7	2	5	9
Sacramento, Calif.	68	39	22	2	3	2	3
San Diego, Calif.	185	113	38	17	6	11	24
San Francisco, Calif.	148	94	30	21	–	3	8
San Jose, Calif.	156	100	37	12	5	2	14
Seattle, Wash.	163	104	35	13	6	5	4
Spokane, Wash.	65	50	11	1	1	2	6
Tacoma, Wash.	33	26	5	1	–	1	1
TOTAL	11,676††	7,390	2,722	771	385	400	425

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

Diabetes – Continued

resultant costs. Diabetics were referred to the program by physicians to receive training in self monitoring, insulin regulation, nutrition education, foot care, and other pertinent topics. Each diabetic referred to the classes participated in a preassessment interview. Self-reported information collected from 533 diabetics at 26 of the education sites in 1980 revealed the following:

a) 59% of the participants were female, average age 57 years
b) The males averaged 53 years of age
c) 78% of all participants were ≥45 years of age
d) 53% had a high school education or better
e) The average duration of diabetes was 6.5 years
f) 45% were managed with insulin
g) 58% were ≥20% over ideal body weight (*2*)
h) 43% had not had an eye examination in the past year
i) 50% had "hypertension"
j) Of the 97 participants hospitalized for diabetes in the past year, 19% had been hospitalized at least once for diabetic ketoacidosis/coma

Although a controlled population was not available for comparison, a 12-month follow-up of the health status and hospitalization patterns was available for 461 diabetics who had completed the course. A total of 96 (33%) fewer hospitalizations occurred in the year following education than in the year preceding the training program (287 hospitalizations before training versus 191 after training). Using average-length-of-stay data from Maine's 100% hospital discharge data base and average cost data, cost savings were estimated to be $203,791 for 941 fewer hospital days among diabetics participating in the education program. The cost of educating the 461 diabetics was approximately $69,150. Thus, the estimated net savings was $134,641 or $292 per participant.

For a 3-year experimental period, Blue Cross and Blue Shield of Maine and Medicare and Medicaid have agreed to reimburse the hospitals and rural health centers that provide the education program. This training costs the third-party payers an average of $150/patient, less than the cost of 1 hospital day.

The Maine DCP has also established a surveillance system using the 100% hospital discharge file to identify morbidity caused by diabetes and Maine vital statistics to identify mortality caused by diabetes. This system will provide baseline data dating back to 1975 and will allow the impact of the education program to be monitored.

Reported by W Nersesian, MD, M Zaremba and a Diabetes Public Health Advisor, Dept of Human Svcs, Augusta, Maine; B Willhoite, MA, Medical Care Development, Inc., Augusta, Maine; Technical Services Section, Diabetes Control Activity, Center for Prevention Svcs, CDC.

Editorial Note: Maine is one of 20 states under cooperative agreement with CDC to conduct diabetes-control demonstration activities. Because self-reported questionnaires administered at specific intervals after educational interventions are commonly used to collect data for evaluation, it is important that individual health-status

Diabetes – Continued

and health-care-utilization data be verified for reliability and validity. Maine and CDC are working together to corroborate the original information from patient interviews with hospital insurance claims information. The Maine program appears to be reaching a high-risk population, because the pre-program hospitalization rate of participants was 6,225/10,000 diabetics/year compared with the estimated rate for all diabetics in Maine of 3,356/10,000 diabetics in 1980.

These preliminary results, if verified, strengthen reports from earlier studies (*3-5*) that substantial reductions in health-care utilization and costs can be achieved through more organized and intensive diabetes education activities. They also support the continuing role for public health in organizing these activities

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Erratum, Vol. 31, No. 20

p265. In the article "National Surveillance of Cocaine Use and Related Health Consequences," the first sentence on page 268 should read: "For example, 64% of all cocaine-related emergencies reported to DAWN in 1980 were reported in combination with the use of other substances, including alcohol."—not 6% as printed. In the Editorial Note on page 273, the U.S. Pharamcopeia description of cocaine should read "white, odorless crystals."

Erratum, Vol. 31, No. 1S

p1S. In the Supplement "Prevention of Malaria in Travelers 1982," on page 12S, the Mexican state of Quintana Rao was erroneously listed as 2 separate states.

Erratum, Vol. 31, No. 22

p294. In the article "Update on Kaposi's Sarcoma and Opportunistic Infections in Previously Healthy Persons—United States," in Figure 2 on page 300, the horizontal axis was mistakenly labeled "Quarter" and numbered 1, 2, 3, and 4 for each year. Actually the subdivisions represent 4 different disease categories. Total cases for the full reporting year are shown in each category. The graph can be corrected by eliminating "Quarter" and the numbers.

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MORBIDITY AND MORTALITY WEEKLY REPORT

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Recommendation of the Immunization Practices Advisory Committee (ACIP)

Inactivated Hepatitis B Virus Vaccine

Introduction

Worldwide, recommendations for using hepatitis B virus (HBV) vaccine will vary in accordance with local patterns of HBV transmission. In the United States, an area of low HBV prevalence, certain groups are at substantially greater risk than the general population of acquiring infection. It is for these higher-risk groups that the vaccine is currently recommended. To date, 12,000 individuals have been given this vaccine, and no untoward effects have been observed over periods of time extending up to 3 years. The recommendations that follow are intended as initial guides for immunization practice, and will be modified as additional data and experience are accumulated. Because the cost of this vaccine is high, a discussion of the cost effectiveness of prevaccination susceptibility testing is included.

Hepatitis B Virus Infection in the United States

The estimated lifetime risk of HBV infection in the United States varies from almost 100% for the highest-risk groups to approximately 5% for the population as a whole. An estimated 200,000 persons, primarily young adults, are infected each year. One-quarter of them become ill with jaundice. More than 10,000 patients are hospitalized with hepatitis B each year, and an average of 250 die of fulminant disease. Between 6% and 10% of young adults with HBV infection become carriers. The United States currently contains an estimated pool of 400,000-800,000 infectious carriers. Chronic active hepatitis develops in over 25% of carriers (100,000-200,000), and often progresses to cirrhosis. Furthermore, recent studies have demonstrated an association between the HBV carrier state and the occurrence of liver cancer. It is estimated that 4,000 persons die from hepatitis B-related cirrhosis each year in this country, and that more than 800 die from hepatitis B-related liver cancer.

The role of the HBV carrier is basic to the epidemiology of HBV transmission. A carrier is defined as a person who is HBsAg positive on at least 2 occasions, at least 6 months apart. Although the degree of infectivity is best correlated with HBeAg positivity, any person with a positive test for HBsAg is potentially infectious. The likelihood of developing the carrier state varies inversely with the age at which infection occurs. During the perinatal period, HBV transmitted from HBeAg-positive mothers results in HBV carriage in up to 90% of infected infants, whereas 6%-10% of acutely infected adults become carriers.

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Hepatitis B — Continued

Carriers and persons with acute cases have highest concentrations of HBV in the blood and serous fluids; less is present in other body fluids, such as saliva and semen. Transmission is via percutaneous or permucosal routes. Infective blood or body fluids can be introduced by means of contaminated needles or through sexual contact. Close personal contacts such as those that occur among household contacts of HBV carriers or among children in institutions for the mentally retarded can also spread infection. Transmission of infection by transfusion of contaminated blood or blood products has been greatly reduced since the advent of routine screening with highly sensitive tests for HBsAg.

Although subtypes of HBV exist, infection or immunization with 1 subtype confers immunity to all subtypes.

Serologic surveys demonstrate that although HBV infection is uncommon among adults in the general population, it is highly prevalent in certain groups. Those at risk, based on the presence of serologic markers of infection, are described in Table 1. Immigrants/refugees and their descendants from areas of high HBV endemicity are at high risk of HBV infection. Homosexually active males and users of illicit injectable drugs are among the highest-risk groups, acquiring infection soon (10%-20%/year) after adopting these lifestyles. Inmates of prisons also appear to be at high risk, possibly as a consequence of drug abuse or homosexual practices. Patients and staff in custodial institutions for the mentally retarded are also at increased risk of having HBV infection. Classroom contacts of some deinstitutionalized carriers may

TABLE 1. Expected hepatitis B virus prevalence in various population groups

	Prevalence of serologic markers of HBV infection	
	HBsAG (%)	**All markers (%)**
High risk		
Immigrants/refugees from areas of high HBV endemicity	13	70-85
Clients in institutions for the mentally retarded	10-20	35-80
Users of illicit parenteral drugs	7	60-80
Homosexually active males	6	35-80
Household contacts of HBV carriers	3-6	30-60
Patients of hemodialysis units	3-10	20-80
Intermediate risk		
Prisoners (male)	1-8	10-80
Staff of institutions for the mentally retarded	1	10-25
Health-care workers		
Frequent blood contact	1-2	15-30
Low risk		
Health-care workers		
No or infrequent blood contact	0.3	3-10
Healthy Adults (first-time volunteer blood donors)	0.3	3-5

Hepatitis B — Continued

also be at higher risk than the general population. Intimate household and sexual contact with HBV carriers increases risk, as does receiving certain pooled plasma products and undergoing hemodialysis.

There is increased risk for certain medical and dental workers, and related laboratory and support personnel, who have frequent contact with blood from infective patients. Employment in a hospital without exposure to blood carries no greater risk than that for the general population.

Vaccine

Hepatitis B virus vaccine is a suspension of inactivated, alum-adsorbed 22-nm surface antigen particles that have been purified from human plasma by a combination of biophysical (ultracentrifugation) and biochemical procedures. Inactivation is a 3-fold process using 8-M urea, pepsin at pH 2, and 1:4,000 formalin. Each of these processes has been shown to inactivate HBV and representative viruses from all known groups, and thus should inactivate any viruses potentially contaminating the vaccine. HBV vaccine contains 20 μg/ml of HBsAg protein.

After a series of 3 intramuscular doses of HBV vaccine, an average of over 90% of healthy adults developed protective antibody (*1,2*). A course of 3 10-μg doses induces antibody in virtually all infants and children 3 months through 9 years of age tested to date. Protective antibody titers have persisted during 3 years of observation, although a gradually declining titer has been observed.

Field trials of the United States-manufactured vaccine have shown 80%-95% efficacy in preventing infection or hepatitis among susceptible persons (*3,4*). Protection against illness was complete for persons who developed antibodies after vaccination but before exposure. The duration of protection and the consequent need for booster doses are not yet known.

Studies are planned or are under way in various settings to assess the value of vaccination after HBV exposure. For post-exposure prophylaxis, see the ACIP recommendations for the use of immune globulin (*5*); see below for recommendations regarding infants born to mothers who are HBV carriers and for sexual contacts of patients with acute hepatitis B.

Vaccine Usage

Primary adult vaccination consists of 3 intramuscular doses of 1.0 ml of vaccine (20 μg/1.0 ml) each. The second and third doses should be given 1 and 6 months, respectively, after the first. For patients undergoing hemodialysis, and for other immunosuppressed patients, 3 2-ml doses (40 μg) should be used. For children under 10 years of age, 3 similarly spaced doses of 0.5 ml (10 μg) are sufficient. Vaccine doses administered at longer intervals than those stipulated provide equally satisfactory protection, but optimal protection is not conferred until after the third dose. Since HBV vaccine is an inactivated (non-infective) product, it is presumed that there will be no interference with other simultaneously administered vaccine(s). The duration of protection and the need for booster doses have not yet been determined.

Vaccine Storage

Vaccine should be stored at 2C-8C but not frozen. *Freezing destroys the potency of the vaccine.*

Side Effects and Adverse Reactions

Side effects among 12,000 recipients of HBV vaccine observed to date have been limited to soreness and redness at the injection site (*3,4*).

Hepatitis B – Continued

Data are not available on the safety of the vaccine for the developing fetus, but because it contains only non-infectious HBsAg particles, the risk to the fetus from the vaccine should be negligible. In contrast, HBV infection in a pregnant woman may result in severe disease for the mother and chronic infection for the newborn. Pregnancy should not be considered a contraindication to the use of this vaccine for persons who are otherwise eligible.

Effect of Vaccination on Carriers

The vaccine produces neither therapeutic nor adverse effects in HBV carriers (*6*).

Vaccination of Immune Persons

Vaccination of individuals who possess antibodies against HBV from a previous infection is not necessary but will not cause adverse effects. Such individuals will have a post-vaccination increase in their anti-HBs levels. Passively acquired antibody, whether from hepatitis B immune globulin (HBIG) administration or from the transplacental route, will not interfere with active immunization (*7*).

Prevaccination Serologic Screening for Susceptibility

HBV carriers and those having antibody from previous infection need not be vaccinated, but serologic screening to detect such individuals before vaccination may or may not be cost effective. The decision to screen potential vaccine recipients is an economic one that depends on 3 variables: 1) the cost of vaccination, 2) the cost of testing for susceptibility, and 3) the prevalence of immune individuals in the group. All are important in estimating whether routine, selective, or no screening will be most economical in an HBV vaccination program.

Figure 1 shows the relative cost effectiveness of screening, given different costs of screening tests and the expected prevalence of immunity. In constructing the figure, the assumption was made that the cost of 3 doses of vaccine is $100 and that there are additional costs for administration. For any combination of screening costs and immunity to hepatitis, the cost effectiveness can be estimated. For example, if the expected prevalence of serologic markers for HBV is over 20%, screening is cost effective if costs of screening are no greater than $30/person. If the expected prevalence of markers is less than 8%, and if the costs of screening are greater than $10 per person, vaccination without screening is cost effective.

Screening in groups with the highest risk of HBV infection (e.g., users of illicit injectable drugs, homosexually active males, and institutionalized mentally retarded persons) will be cost effective unless testing costs are extremely high. For groups at intermediate risk (e.g., health-care workers with an expected prevalence of 8%-20%), cost effectiveness of screening may be marginal, and vaccination programs may or may not utilize screening. For groups with a low expected prevalence of HBV serologic markers (e.g., entering health professionals) screening will not be cost effective.

For routine screening, only 1 antibody test, either anti-HBc or anti-HBs, need be used. Anti-HBc will identify all previously infected persons, both carriers and those who are not carriers, but will not discriminate between members of the 2 groups. Anti-HBs will identify those previously infected except for carriers. For groups expected to have carrier rates of <2%, such as health-care workers, neither test has a particular advantage. For groups with higher carrier rates, anti-HBc may be preferred to avoid unnecessary vaccination of carriers. If a radioimmunoassay (RIA) anti-HBs test is used for screening, a minimum of 10 RIA sample ratio units should be used to designate immunity (2.1 is the usual designation of a positive test) (*4*).

Serologic Confirmation of Post-Vaccination Immunity

HBV vaccine produces protective antibody (anti-HBs) in more than 90% of healthy persons

Hepatitis B – Continued

(*1-2*). Revaccination of those persons who did not respond to the primary series has produced antibody in only one-third. Thus, there seems little need to test for immunity following vaccination except for dialysis patients, whose subsequent management depends on knowing their immune status.

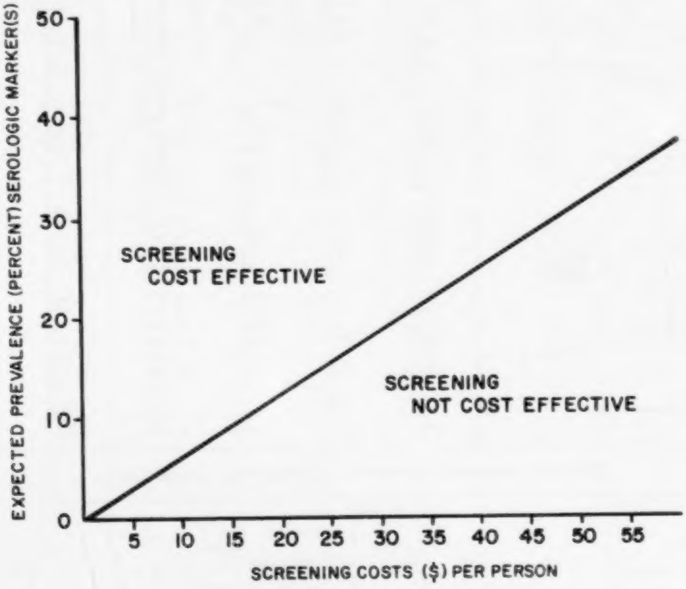
Pre-Exposure Vaccination

Persons at substantial risk of HBV infection who are demonstrated or judged likely to be susceptible should be vaccinated. They include:

Health-Care Workers—Health-care workers (medical, dental, laboratory, and support groups) have varied risks of exposure to HBV depending on their jobs. Those workers for whom vaccine is recommended should be vaccinated as soon as possible after beginning work in a high-risk environment, ideally during their period of training.

Hospital Staff—Hospital staff are at increased risk of HBV infection because of contact with blood and blood products. The risk for hospital personnel can vary both among hospitals and within hospitals. In developing specific immunization strategies, hospitals should use available published data about the risk of infection (*8-10*) and, in addition, may wish to evaluate their own clinical and institutional experience with hepatitis B.

FIGURE 1. Cost effectiveness of pre-vaccination screening of hepatitis B virus vaccine candidates*



*See text for assumptions.

Hepatitis B — Continued

Studies in urban centers have indicated that occupational groups with frequent exposure to blood and/or needles have a substantial risk of acquiring HBV infection. The highest risk is for individuals with frequent blood exposure, including the following groups: medical technologists, operating room staff, phlebotomists and intravenous therapy nurses, surgeons and pathologists, and oncology and dialysis unit staff. Other groups that have been shown to be at increased risk in some hospitals include: emergency room staff, nursing personnel, and physicians. To quantitate HBV risks among workers, groups can be ranked according to their frequency of blood/needle exposure. Additional information can be obtained from employee health records, serologic prevalence surveys, and estimates of HBsAg prevalence among patients.

Other Health-Care Workers—Other health workers, based outside of hospitals, who have frequent contact with blood or blood products are at increased risk of acquiring HBV infection. These include dental professionals (dentists, oral surgeons, dental hygienists), laboratory and blood bank technicians, dialysis center staff, morticians, and similar professionals.

(Continued on page 327)

TABLE I. Summary — cases of specified notifiable diseases, United States

DISEASE		24th WEEK ENDING			CUMULATIVE, FIRST 24 WEEKS		
		June 19 1982	June 20 1981	MEDIAN 1977-1981	June 19 1982	June 20 1981	MEDIAN 1977-1981
Aseptic meningitis		129	141	108	1,880	1,765	1,288
Brucellosis		2	6	3	66	66	78
Encephalitis:	Primary (arthropod-borne & unspec.)	18	27	16	349	339	290
	Post-infectious	2	1	7	36	44	97
Gonorrhea:	Civilian	16,689	19,887	19,833	412,055	448,827	432,043
	Military	429	450	430	12,182	13,280	12,389
Hepatitis:	Type A	363	615	597	10,010	11,805	13,094
	Type B	389	472	343	9,311	9,154	7,580
	Non A, Non B	42	N	N	983	N	N
	Unspecified	188	248	184	4,149	5,086	4,576
Legionellosis		5	N	N	178	N	N
Leprosy		1	2	3	85	102	80
Malaria		13	34	19	396	597	262
Measles (rubeola)		63	33	521	842	2,143	10,788
Meningococcal infections:	Total	47	51	51	1,646	2,030	1,508
	Civilian	47	51	51	1,640	2,022	1,493
	Military	-	-	-	6	8	10
Mumps		156	85	387	3,624	2,613	9,458
Pertussis		16	17	29	473	473	503
Rubella (German measles)		66	29	336	1,569	1,409	9,212
Syphilis (Primary & Secondary):	Civilian	662	550	431	14,937	13,764	11,007
	Military	17	10	3	186	176	140
Tuberculosis		523	582	615	11,767	12,140	12,507
Tularemia		6	6	6	62	79	63
Typhoid fever		11	16	8	172	219	199
Typhus fever, tick-borne (RMSF)		46	49	56	290	395	283
Rabies, animal		146	150	89	2,842	3,516	2,196

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	-	Poliomyelitis: Total	2
Botulism (Ohio 1)	33	Paralytic	2
Cholera	-	Psittacosis (Conn. 1)	52
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	-	Tetanus (Iowa 1, Ga. 1)	34
Leptospirosis (Upstate NY 1)	29	Trichinosis	53
Plague	4	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	12

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending June 19, 1982 and June 20, 1981 (24th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	129	66	349	36	412,055	448,827	363	389	42	188	5	85
NEW ENGLAND	6	3	15	4	10,067	11,026	24	19	1	6	1	1
Maine	–	–	–	–	464	556	2	–	1	1	–	–
N.H.	2	–	–	–	296	377	–	1	–	–	–	–
Vt.	–	–	–	–	201	195	2	–	–	–	1	–
Mass.	–	–	5	–	4,655	4,529	6	4	–	4	–	–
R.I.	1	–	–	–	699	571	9	–	–	–	–	–
Conn.	3	3	10	4	3,752	4,798	5	14	–	1	–	1
MID. ATLANTIC	10	–	47	9	52,151	51,650	42	72	6	9	–	4
Upstate N.Y.	1	–	18	3	8,242	8,711	8	23	1	2	–	1
N.Y. City	3	–	9	–	22,188	20,654	13	25	–	2	–	1
N.J.	1	–	10	–	9,353	10,132	21	24	5	5	–	1
Pa.	5	–	10	6	12,368	12,153	U	U	–	U	–	1
E.N. CENTRAL	7	–	74	7	55,496	70,551	26	41	1	14	3	3
Ohio	4	–	22	4	17,368	24,551	12	32	1	6	3	–
Ind.	2	–	15	2	6,689	6,386	8	4	–	7	–	–
Ill.	–	–	6	1	11,591	19,188	2	2	–	1	–	3
Mich.	–	–	25	–	14,304	14,396	2	3	–	–	–	–
Wis.	1	–	2	–	5,544	6,030	2	–	–	–	–	–
W.N. CENTRAL	2	7	18	3	19,974	21,158	20	17	2	3	–	1
Minn.	1	–	2	1	3,004	3,397	4	1	–	1	–	–
Iowa	–	1	9	1	2,178	2,245	3	1	–	–	–	–
Mo.	–	2	4	–	9,146	9,672	4	7	–	2	–	1
N. Dak.	–	–	–	–	278	306	–	–	–	–	–	–
S. Dak.	–	1	–	1	552	602	–	–	–	–	–	–
Nebr.	1	–	2	–	1,260	1,614	–	2	–	–	–	–
Kans.	–	3	1	–	3,556	3,272	9	6	2	–	–	–
S. ATLANTIC	33	15	53	6	99,426	109,893	54	77	9	32	–	5
Del.	–	–	–	–	1,698	1,633	2	2	–	2	–	–
Md.	1	–	12	–	13,790	11,846	5	14	–	6	–	2
D.C.	–	–	–	–	5,905	6,935	–	3	–	–	–	–
Va.	5	6	12	1	9,423	10,086	3	11	1	3	–	1
W. Va.	–	–	–	–	1,251	1,638	1	3	–	1	–	–
N.C.	3	–	4	1	17,665	16,970	1	6	–	3	–	–
S.C.	–	2	–	–	10,476	10,240	9	7	–	2	–	–
Ga.	4	1	–	–	9,483	22,501	6	12	3	–	–	–
Fla.	20	6	25	4	29,735	28,044	27	19	5	15	–	2
E.S. CENTRAL	12	7	19	2	36,148	37,358	30	21	1	5	–	–
Ky.	–	–	–	–	4,938	4,773	9	2	–	2	–	–
Tenn.	2	4	11	–	13,905	14,135	19	11	–	–	–	–
Ala.	10	2	5	2	10,809	11,554	2	8	1	3	–	–
Miss.	–	1	3	–	6,496	6,896	–	–	–	–	–	–
W.S. CENTRAL	28	19	38	1	60,016	59,235	82	41	1	86	–	9
Ark.	1	4	1	–	4,947	4,002	3	5	–	2	–	–
La.	1	2	4	–	11,057	9,502	15	6	1	19	–	–
Okla.	2	3	11	–	6,454	6,293	7	4	–	3	–	–
Tex.	24	10	22	1	37,558	39,438	57	26	–	62	–	9
MOUNTAIN	6	–	17	1	14,885	17,629	23	13	7	8	–	2
Mont.	2	–	–	–	615	614	–	–	–	–	–	–
Idaho	–	–	–	–	715	721	–	–	–	–	–	1
Wyo.	–	–	–	–	421	400	–	–	–	–	–	–
Colo.	–	–	7	1	3,989	4,729	1	8	1	–	–	–
N. Mex.	–	–	–	–	1,868	1,924	11	–	4	3	–	–
Ariz.	U	–	6	–	3,951	5,506	U	U	U	U	U	–
Utah	2	–	–	–	691	821	4	–	2	2	–	1
Nev.	2	–	4	–	2,635	2,914	7	5	–	3	–	–
PACIFIC	25	15	68	3	63,892	70,327	62	88	14	25	1	60
Wash.	–	–	7	–	5,229	5,940	7	7	–	1	1	6
Oreg.	2	–	1	–	3,559	4,509	3	4	–	1	–	–
Calif.	22	14	56	3	52,371	56,747	51	76	14	23	–	34
Alaska	–	1	3	–	1,599	1,763	–	–	–	–	–	1
Hawaii	1	–	1	–	1,134	1,368	1	1	–	–	–	19
Guam	U	–	–	–	42	64	U	U	U	U	U	–
P.R.	U	–	1	–	1,295	1,530	U	U	U	U	U	–
V.I.	–	–	–	–	74	76	–	–	–	–	–	–
Pac. Trust Terr.	U	–	–	–	36	199	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 19, 1982 and June 20, 1981 (24th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	13	396	63	842	2,143	47	1,646	156	3,624	16	66	1,569	1,409
NEW ENGLAND	1	22	1	5	72	2	87	-	143	-	1	14	103
Maine	-	-	-	-	5	1	4	-	32	-	-	-	33
N.H	-	-	1	2	6	-	12	-	12	-	-	8	42
Vt.	-	-	-	2	2	1	5	-	5	-	-	-	-
Mass.	1	17	-	2	51	-	22	-	70	-	1	3	17
R.I.	-	1	-	-	-	-	11	-	12	-	-	1	-
Conn.	-	4	-	3	8	-	33	-	12	-	-	2	11
MID. ATLANTIC	3	54	14	130	693	17	306	5	225	-	-	76	166
Upstate N.Y.	-	14	8	93	190	3	95	-	42	-	-	37	69
N.Y. City	2	17	6	29	49	-	50	1	35	-	-	26	46
N.J.	1	16	-	4	50	9	62	1	33	-	-	13	43
Pa.	-	7	-	4	404	5	98	3	115	-	-	-	8
E.N. CENTRAL	-	25	7	50	72	3	195	46	2,011	-	5	140	300
Ohio	-	7	1	1	15	1	77	38	1,493	-	-	-	-
Ind.	-	1	-	2	9	2	19	-	33	-	-	24	100
Ill.	-	3	-	16	21	-	49	5	142	-	5	54	71
Mich.	-	12	6	31	27	-	39	2	267	-	-	42	31
Wis.	-	2	-	-	1	-	11	1	76	-	-	20	98
W.N. CENTRAL	2	12	4	35	7	1	69	81	472	-	2	56	72
Minn.	1	1	-	-	3	-	14	80	357	-	1	6	7
Iowa	1	5	-	-	1	-	5	-	29	-	-	-	3
Mo.	-	3	-	2	1	1	21	-	13	-	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	3	-	1	-	-	1	-
Nebr.	-	2	-	-	1	-	9	-	-	-	-	-	1
Kans.	-	1	4	33	1	-	11	1	72	-	1	11	59
S. ATLANTIC	2	58	-	33	311	9	330	4	205	5	3	60	111
Del.	-	-	-	-	-	-	-	-	6	-	-	1	1
Md.	-	7	-	2	1	-	20	1	21	-	-	31	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	-	22	-	14	6	2	36	-	30	1	2	10	3
W. Va.	1	3	-	2	7	-	7	-	80	-	-	1	20
N.C.	-	-	-	-	3	3	66	-	9	1	-	1	4
S.C.	-	3	-	-	-	1	39	-	11	-	-	1	7
Ga.	-	8	-	-	99	2	69	2	10	1	1	5	29
Fla.	1	12	-	14	194	1	91	1	38	2	-	10	46
E.S. CENTRAL	-	5	1	7	-	4	112	1	29	3	-	37	22
Ky.	-	4	-	1	-	1	19	-	9	-	-	21	13
Tenn.	-	-	1	5	-	3	44	-	11	1	-	-	8
Ala.	-	-	-	-	-	-	43	-	5	-	-	-	1
Miss.	-	1	-	1	-	-	6	1	4	2	-	16	-
W.S. CENTRAL	2	31	2	23	691	6	194	2	136	4	5	83	112
Ark.	-	3	-	-	1	1	12	-	6	-	-	-	2
La.	-	3	-	-	-	-	34	-	3	1	-	-	9
Okla.	-	3	-	-	5	-	16	-	-	-	-	3	-
Tex.	2	22	2	23	685	5	132	2	127	3	5	80	101
MOUNTAIN	-	9	-	5	28	1	82	-	52	2	-	50	68
Mont.	-	-	-	-	-	-	4	-	3	-	-	4	3
Idaho	-	-	-	-	1	-	6	-	3	-	-	-	3
Wyo.	-	-	-	-	-	1	5	-	2	-	-	5	1
Colo.	-	5	-	5	5	-	31	-	8	2	-	4	29
N. Mex.	-	2	-	-	8	-	12	-	-	-	-	5	5
Ariz.	U	1	U	-	4	U	14	U	23	U	U	7	17
Utah	-	1	-	-	-	-	7	-	11	-	-	16	3
Nev.	-	-	-	-	10	-	3	-	2	-	-	9	7
PACIFIC	3	180	34	550	269	4	271	17	351	2	50	1,053	455
Wash.	-	10	1	25	1	-	29	1	58	1	-	30	53
Oreg.	-	5	-	-	3	-	55	-	-	-	-	3	48
Calif.	3	163	33	521	263	4	175	16	281	1	50	1,012	349
Alaska	-	-	-	1	-	-	9	-	6	-	-	1	-
Hawaii	-	2	-	3	2	-	3	-	6	-	-	7	5
Guam	U	1	U	-	6	U	1	U	1	U	U	1	1
P.R.	U	4	U	63	193	U	5	U	39	U	U	4	3
V.I.	-	-	-	-	7	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 19, 1982 and June 20, 1981 (24th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	14,937	13,764	523	11,767	62	11	172	46	290	2,842
NEW ENGLAND	252	298	10	311	-	-	11	1	3	21
Maine	1	2	1	24	-	-	-	-	-	19
N.H.	1	12	-	10	-	-	-	-	-	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	176	194	5	208	-	-	8	-	1	-
R.I.	12	18	-	11	-	-	-	-	1	-
Conn.	61	59	4	51	-	-	1	1	1	2
MID. ATLANTIC	2,063	2,077	59	1,926	6	5	29	-	6	69
Upstate N.Y.	216	188	11	329	6	1	3	-	-	36
N.Y. City	1,244	1,262	25	715	-	2	19	-	-	-
N.J.	268	272	23	395	-	1	4	-	5	1
Pa.	335	355	U	487	-	1	3	-	1	32
E.N. CENTRAL	739	972	91	1,790	-	-	14	5	28	323
Ohio	145	128	11	296	-	-	6	5	27	51
Ind.	93	100	8	232	-	-	-	-	-	47
Ill.	317	531	34	705	-	-	3	-	1	153
Mich.	132	166	33	453	-	-	5	-	-	2
Wis.	52	47	5	104	-	-	-	-	-	70
W.N. CENTRAL	290	273	19	357	10	-	6	-	4	625
Minn.	55	97	6	63	-	-	3	-	-	101
Iowa	14	13	2	46	1	-	1	-	-	197
Mo.	175	138	9	164	6	-	1	-	2	63
N. Dak.	4	6	1	7	-	-	-	-	-	57
S. Dak.	-	2	1	14	-	-	-	-	-	47
Nebr.	8	3	-	15	1	-	-	-	-	75
Kans.	34	14	-	48	2	-	1	-	2	85
S. ATLANTIC	4,133	3,637	135	2,433	7	4	27	27	167	463
Del.	8	7	1	26	-	-	-	-	-	-
Md.	232	284	20	297	1	-	6	2	20	21
D.C.	255	303	5	97	-	-	-	-	-	-
Va.	296	339	18	281	1	-	2	6	18	236
W. Va.	15	9	-	69	-	1	3	-	3	21
N.C.	281	284	24	390	-	-	-	11	72	25
S.C.	207	247	1	213	4	-	3	5	40	25
Ga.	861	539	17	344	-	-	-	3	13	101
Fla.	1,978	1,225	49	696	1	3	13	-	1	34
E.S. CENTRAL	1,055	899	45	1,087	6	2	13	2	14	354
Ky.	56	47	10	281	-	-	-	-	-	73
Tenn.	283	354	21	368	4	-	2	1	8	227
Ala.	375	243	8	304	-	2	9	1	4	54
Miss.	341	255	6	134	2	-	2	-	2	-
W.S. CENTRAL	3,827	3,297	77	1,396	25	-	13	9	62	588
Ark.	99	63	13	136	17	-	1	4	11	78
La.	826	734	7	240	1	-	-	-	-	16
Okla.	79	81	12	206	7	-	2	4	30	113
Tex.	2,823	2,419	45	814	-	-	10	1	21	381
MOUNTAIN	369	337	5	333	4	-	6	2	5	93
Mont.	3	8	-	25	-	-	-	-	-	36
Idaho	18	9	1	14	1	-	-	-	1	1
Wyo.	10	6	-	2	1	-	-	-	1	7
Colo.	107	106	3	45	-	-	2	-	-	10
N. Mex.	78	71	1	61	-	-	-	-	1	10
Ariz.	87	69	U	133	-	U	3	U	-	26
Utah	12	11	-	17	2	-	1	-	-	1
Nev.	54	57	-	36	-	-	-	2	2	2
PACIFIC	2,209	1,974	82	2,134	4	-	53	-	1	306
Wash.	69	66	12	132	1	-	3	-	-	-
Oreg.	60	43	7	82	-	-	1	-	-	-
Calif.	2,012	1,823	60	1,728	3	-	48	-	1	237
Alaska	8	6	-	32	-	-	-	-	-	69
Hawaii	60	36	3	160	-	-	1	-	-	-
Guam	1	-	U	3	-	U	-	U	-	-
P.R.	273	315	U	157	-	U	1	U	-	24
V.I.	5	6	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending June 19, 1982 (24th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	624	415	143	25	18	18	46
Boston, Mass.	138	92	31	6	6	3	16
Bridgeport, Conn.	49	31	12	3	2	1	5
Cambridge, Mass.	28	22	4	1	1	-	3
Fall River, Mass.	25	19	6	-	-	-	-
Hartford, Conn.	38	19	14	1	2	2	1
Lowell, Mass.	28	18	10	-	-	-	-
Lynn, Mass.	13	10	3	-	-	-	1
New Bedford, Mass.	29	20	7	1	1	-	4
New Haven, Conn.	56	40	9	3	1	3	1
Providence, R.I.	64	37	13	6	1	7	4
Somerville, Mass.	14	7	5	1	1	-	1
Springfield, Mass.	42	25	11	3	1	1	4
Waterbury, Conn.	34	26	6	2	-	-	4
Worcester, Mass.	66	49	12	2	2	1	2
MID. ATLANTIC	2,443	1,570	551	144	81	96	71
Albany, N.Y.	52	36	9	2	1	4	-
Allentown, Pa.	15	15	-	-	-	-	1
Buffalo, N.Y.	110	73	26	6	3	2	7
Camden, N.J.	42	25	13	2	1	1	2
Elizabeth, N.J.	36	21	13	-	-	2	-
Erie, Pa.†	40	25	12	-	2	1	-
Jersey City, N.J.	65	36	14	2	1	12	1
N.Y. City, N.Y.	1,359	868	291	106	54	40	34
Newark, N.J.	67	32	18	3	4	9	6
Paterson, N.J.	27	17	8	1	-	1	1
Philadelphia, Pa.†	199	121	52	8	7	11	7
Pittsburgh, Pa.†	70	42	23	2	-	3	1
Reading, Pa.	28	19	6	-	-	3	1
Rochester, N.Y.	140	97	31	7	3	2	5
Schenectady, N.Y.	17	12	3	2	-	-	-
Scranton, Pa.†	27	21	5	-	1	-	-
Syracuse, N.Y.	81	62	9	3	4	3	2
Trenton, N.J.	28	18	9	-	-	1	-
Utica, N.Y.	15	12	3	-	-	-	1
Yonkers, N.Y.	25	18	6	-	-	1	2
E.N. CENTRAL	2,178	1,292	539	176	88	84	60
Akron, Ohio	54	37	9	3	2	3	-
Canton, Ohio	39	21	13	4	1	-	2
Chicago, Ill.	508	295	109	56	18	30	12
Cincinnati, Ohio	135	74	39	10	9	3	4
Cleveland, Ohio	154	73	53	15	7	6	2
Columbus, Ohio	132	84	35	6	4	3	4
Dayton, Ohio	99	61	25	4	6	3	1
Detroit, Mich.	282	151	77	37	12	5	18
Evansville, Ind.	26	19	6	-	-	1	-
Fort Wayne, Ind.	43	30	9	1	3	-	2
Gary, Ind.	18	11	4	2	1	-	-
Grand Rapids, Mich.	48	33	7	3	2	3	1
Indianapolis, Ind.	162	88	43	15	8	8	1
Madison, Wis.	43	34	6	1	1	1	1
Milwaukee, Wis.	145	104	29	4	3	5	-
Peoria, Ill.	41	31	7	2	-	1	3
Rockford, Ill.	53	27	11	4	3	8	4
South Bend, Ind.	47	23	13	4	4	3	1
Toledo, Ohio	101	69	25	4	3	-	2
Youngstown, Ohio	48	27	18	1	1	1	2
W.N. CENTRAL	755	532	144	37	19	22	26
Des Moines, Iowa§	55	51	-	1	1	1	-
Duluth, Minn.	33	23	5	-	4	1	2
Kansas City, Kans.	29	23	3	2	1	-	-
Kansas City, Mo.	153	99	34	5	5	10	8
Lincoln, Nebr.	39	27	11	-	1	-	-
Minneapolis, Minn.	88	65	14	5	-	4	2
Omaha, Nebr.	92	65	21	3	2	1	4
St. Louis, Mo.	147	87	38	15	3	4	8
St. Paul, Minn.	62	53	7	1	-	1	-
Wichita, Kans.	57	39	11	5	2	-	2
S. ATLANTIC	1,145	679	297	78	44	46	29
Atlanta, Ga.	133	78	44	10	1	-	1
Baltimore, Md.	222	133	58	20	7	4	2
Charlotte, N.C.	65	42	13	3	4	2	1
Jacksonville, Fla.	99	55	26	8	8	2	3
Miami, Fla.	105	67	21	10	4	3	1
Norfolk, Va.	56	30	17	2	2	5	-
Richmond, Va.	68	41	20	3	3	1	7
Savannah, Ga.	27	11	9	1	1	5	-
St. Petersburg, Fla.	91	73	12	2	1	3	2
Tampa, Fla.	65	29	19	3	4	10	3
Washington, D.C.	151	84	39	13	5	10	6
Wilmington, Del.	63	36	19	3	4	1	3
E.S. CENTRAL	679	415	169	48	24	23	33
Birmingham, Ala.	93	50	26	4	9	4	2
Chattanooga, Tenn.	53	31	12	8	1	1	5
Knoxville, Tenn.	37	22	12	3	-	-	1
Louisville, Ky.	107	71	26	6	2	2	7
Memphis, Tenn.	176	110	40	15	4	7	12
Mobile, Ala.	69	37	17	3	7	5	4
Montgomery, Ala.	29	21	3	3	1	1	-
Nashville, Tenn.	115	73	33	6	-	3	2
W.S. CENTRAL	1,333	756	337	120	70	50	47
Austin, Tex.	67	42	14	4	4	3	3
Baton Rouge, La.	52	36	13	2	1	-	1
Corpus Christi, Tex.	55	38	15	1	-	1	2
Dallas, Tex.	168	101	41	13	6	7	3
El Paso, Tex.	50	25	9	9	3	4	3
Fort Worth, Tex.	82	54	15	8	4	1	4
Houston, Tex.	416	192	126	50	32	16	5
Little Rock, Ark.	62	39	13	4	2	4	6
New Orleans, La.	68	42	12	8	5	1	-
San Antonio, Tex.	155	94	37	10	5	9	6
Shreveport, La.	64	36	16	4	5	3	3
Tulsa, Okla.	94	57	26	7	3	1	11
MOUNTAIN	570	369	119	39	26	17	18
Albuquerque, N.Mex.	67	39	12	7	6	3	4
Colo. Springs, Colo.	41	24	10	3	2	2	1
Denver, Colo.	103	64	24	10	3	2	4
Las Vegas, Nev.	68	44	14	5	2	3	3
Ogden, Utah	24	15	5	1	2	1	2
Phoenix, Ariz.	121	88	22	4	2	5	1
Pueblo, Colo.	20	16	4	-	-	-	1
Salt Lake City, Utah	45	26	9	6	4	-	-
Tucson, Ariz.	81	53	19	3	5	1	2
PACIFIC	1,884	1,250	390	118	75	49	73
Berkeley, Calif.	17	8	8	-	-	1	-
Fresno, Calif.	57	35	10	4	6	2	4
Glendale, Calif.	36	27	7	1	1	-	1
Honolulu, Hawaii	61	41	11	4	4	1	4
Long Beach, Calif.	100	67	25	5	1	2	-
Los Angeles, Calif.	648	436	125	48	28	11	18
Oakland, Calif.	62	44	14	3	1	-	-
Pasadena, Calif.	32	25	4	1	-	2	3
Portland, Oreg.	99	71	19	2	1	4	7
Sacramento, Calif.	59	32	17	3	5	2	2
San Diego, Calif.	158	93	37	14	7	7	13
San Francisco, Calif.	179	112	40	17	5	5	2
San Jose, Calif.	164	110	36	8	8	2	14
Seattle, Wash.	116	83	16	6	5	6	1
Spokane, Wash.	43	29	10	1	1	2	4
Tacoma, Wash.	53	37	11	1	2	2	-
TOTAL	11,611††	7,278	2,688	789	445	405	403

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Hepatitis B – Continued

Clients and Staff of Institutions for the Mentally Retarded – Susceptible clients and selected staff of institutions for the mentally retarded should be vaccinated. Risks for staff are comparable to those for health-care personnel in other high-risk environments. However, the risk in institutional environments is associated not only with blood exposure, but is also consequent to bites and contact with skin lesions, saliva, and other infective secretions.

Hemodialysis Patients – Numerous studies have established the high risk of HBV virus transmission in hemodialysis units. While recent data have shown a decrease in the rate of HBV infection in hemodialysis units following introduction of environmental control measures, vaccination is recommended for susceptible patients.

Homosexually Active Males – Susceptible homosexually active males should be vaccinated regardless of their age or duration of their homosexual practices. It is important to vaccinate persons as soon as possible after their homosexual activity begins. Homosexually active females do not appear to be at increased risk of sexually transmitted HBV infection.

Illicit Injectable Drug Users – All users of illicit injectable drugs who are susceptible to HBV should be vaccinated as early as possible after their drug use begins.

Recipients of Certain Blood Products – Although screening of all blood donors for HBsAg has decreased the incidence of transfusion-related HBV infection, patients with clotting disorders who receive factor VIII or IX concentrates have an elevated risk of HBV infection. Vaccination is recommended for these persons, and should be initiated at the time their specific clotting disorder is identified. Screening is recommended for patients who have already received multiple infusions of these products.

Household and Sexual Contacts of HBV Carriers – Household contacts of HBV carriers are at high risk of HBV infection. Sexual contacts appear to be at greatest risk. Vaccination of susceptible household contacts of carriers is recommended. At present, most carriers are identified through routine screening of donated blood, diagnostic testing in hospitals, or through other screening programs among high-risk groups. As part of expanded HBV control programs, additional screening to identify HBV carriers may be warranted.

Other Contacts of HBV Carriers – Persons in contact with carriers at schools, offices, etc., are at minimal risk of contracting HBV, and vaccine is not routinely recommended for them. However, classroom contacts of deinstitutionalized mentally retarded HBV carriers who behave aggressively or have special medical problems that increase the risk of exposure to their blood or serous secretions may be at risk. In such situations, vaccine may be offered to classroom contacts.

Special High-Risk Populations – Some American populations, such as Alaskan Eskimos, and immigrants and refugees from areas with highly endemic disease (particularly eastern Asia and sub-Saharan Africa) have high HBV infection rates and deserve special attention. Depending on specific epidemiologic and public health considerations, more extensive vaccination programs may be warranted.

Inmates of Long-Term Correctional Facilities – The prison environment may provide a favorable setting for the transmission of HBV because of the frequent use of illicit injectable drugs and homosexual practices. In such institutions, prison officials may elect to undertake screening and vaccination programs.

Post-Exposure Vaccination

Infants Born to HBsAg-Positive Mothers – Pregnant women who are HBsAg positive should be informed about the risk of transmission to their infants. Infants born to these

Hepatitis B – Continued

women should receive HBIG (*5,11*). Infants whose mothers are chronic carriers will be continuously exposed to HBV throughout their childhood; therefore these infants should receive vaccine. The optimum timing for vaccination in conjunction with HBIG administration has not been established. Pending additional information, it is recommended that vaccination begin at 3 months of age or shortly thereafter. Studies to determine the immunogenicity and efficacy of vaccine at birth, with or without HBIG, are currently under way.

Sexual and Household Contacts of Acute Hepatitis B Cases and Health Workers Who Receive Needle Sticks from HBsAg-Positive Patients—Possible alternatives for post-exposure prophylaxis include HBIG, immunoglobulin (IG), HBV vaccine, or a combination of vaccine and an immune globulin. Recommendations for immune globulin use have already been published (*5*). Studies are currently under way to evaluate the use of vaccine in some of these settings. No recommendations can be made at this time for post-exposure use of HBV vaccine.

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Current Trends

Revised Recommendations for Malaria Chemoprophylaxis for Travelers to East Africa

The following statement updates information published in the "East Africa" section of the MMWR supplement, "Prevention of Malaria in Travelers, 1982" (MMWR Vol. 31/No.1S, p. 24S) dated April 16, 1982.

Infections with chloroquine-resistant *Plasmodium falciparum* malaria acquired by travelers to East Africa were first reported in 1978 (*1*). Since then, there have been a number of similar case reports in the world literature, all describing chloroquine-prophylaxis and/or -treatment

Malaria Chemoprophylaxis – Continued

failures in non-immune travelers to East Africa (*2-4*).

In the past 18 months, an additional 19 such cases of chloroquine-prophylaxis failure among U.S. travelers have been reported to and documented by CDC. When available, chloroquine levels in blood tested at the time of diagnosis have corroborated the history of chloroquine prophylaxis. In several instances, malaria parasites from these patients have been adapted to *in vitro* culture, and *in vitro* drug-sensitivity testing has confirmed the parasites' *in vivo* resistance to chloroquine. To date, the countries in which chloroquine-resistant infections in non-immune travelers have been acquired include: Kenya, Tanzania, Uganda, Madagascar, and Comoros (*5*). There have been no documented cases from West Africa.

These data offer compelling evidence that chloroquine-resistant *P. falciparum* transmission is widely dispersed in East Africa, and that there is substantial risk of infection for American travelers, despite chloroquine prophylaxis. Foreign Service officers, Peace Corps volunteers, missionaries, and workers who live for extended periods in areas with high transmission may be at particular risk. Consultation with medical personnel of the U. S. Department of State and of the Peace Corps confirms that cases of chloroquine prophylaxis failure have occurred in these groups within the past year.

Fansidar* is the drug most commonly used to suppress chloroquine-resistant *P. falciparum* malaria. Each tablet contains a fixed combination of pyrimethamine, 25 mg, and sulfadoxine, 500 mg. Fansidar was licensed for sale in the United States in January 1982.

Chloroquine and the 2 components of Fansidar interrupt different metabolic pathways of the malaria parasite. Therefore, while the risk of acquiring malaria can never be completely eliminated, available information indicates that the combination of chloroquine with Fansidar will be substantially more effective prophylactically than Fansidar alone. When Fansidar prophylaxis is indicated, chloroquine should always be taken concurrently because: 1) Fansidar alone may not always be efficacious (even against sensitive strains of *P. falciparum*) due to "host failure" (*6*), 2) the addition of chloroquine may retard the emergence of Fansidar-resistant malaria, and 3) the effectiveness of Fansidar as a prophylaxis for the other species of human malaria in East Africa has not been adequately documented.

On the basis of accumulating evidence and the advice of a recently convened group of experts, CDC's recommendations now are: **Fansidar, 1 tablet once weekly PLUS chloroquine 300 mg (base) once weekly.** Weekly doses of Fansidar and chloroquine may be taken on the same day, at the same time.

Contraindications to Fansidar

1. **Pregnant women**. Fansidar is not recommended for pregnant women, due to results of animal studies suggesting that pyrimethamine may have teratogenic potential. Pregnant women who cannot avoid travel to areas of the world with chloroquine-resistant malaria should use chloroquine alone as prophylaxis. Health-care providers should advise these patients that they are at increased risk of acquiring malaria, and should be especially alert for the development of a febrile illness.
2. **Allergy to sulfonamides**. The use of Fansidar is contraindicated for persons allergic to sulfonamides; a pyrimethamine-dapsone combination (marketed overseas as Maloprim) may be useful for individuals who do not have cross-hypersensitivity to sulfones. Of note, hematologic toxicity attributed to dapsone has been reported when it has been taken for malaria prophylaxis (*7*).

---

*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Malaria Chemoprophylaxis – Continued

3. **Children under 2 months old.** Fansidar should not be given to children <2 months of age, as sulfa drugs may induce neonatal jaundice. Chloroquine may be given to newborns, but parents should be aware of the potential for prophylaxis failure in areas where transmission of chloroquine-resistant malaria is known to occur.

Long-Term Use of Fansidar.

There have been few studies of the long-term side effects of Fansidar prophylaxis (*8,9*), and no studies of the side effects of concurrent use of both chloroquine and Fansidar. Long-term administration of pyrimethamine may induce megaloblastic anemia, leukopenia, or other hematologic toxicity. While these side effects are usually reversible, routine hemograms should be obtained from persons on Fansidar prophylaxis for longer than 6 months.

Reported by Malaria Br, Div of Parasitic Diseases, Center for Infectious Diseases, CDC.

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Erratum, Vol. 31, No. 20

p275. In the article "Licensure of Yomesan," the generic name for this drug remains niclosamide. Niclocide™ is the trade name under which it will be marketed by Miles Pharmaceuticals for human use in the United States. Yomesan™ is a Bayer (West Germany) trade name under which niclosamide is marketed in certain other countries. Physicians should not request niclosamide directly from the manufacturer. Prescriptions can be filled by pharmacists, who should obtain the drug through Miles distributors.

Erratum, Vol. 31, No. 21

p277. In the article "Diffuse, Undifferentiated Non-Hodgkins Lymphoma among Homosexual Males—United States," in the fourth paragraph of the Editorial Note on page 278, the incorrect term "anal rectum" was used in 2 sentences. The correct term is "anorectum."

Erratum, Vol. 31, No. 22

p301. In the article "Plague Vaccine," in the section **Primary Vaccination** on page 303, the age range for children was incorrect. That portion should read: "Children ≤10 years old: The primary series is also 3 doses of vaccine, but the doses are smaller (Table 1). The intervals between injections are the same as for adults."

The Morbidity and Mortality Weekly Report, circulation 108,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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31/25

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MMWR

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Current Trends

Pertussis Surveillance, 1979-1981

In 1979, in cooperation with state and territorial epidemiologists, CDC introduced a supplementary pertussis surveillance system to gather more detailed information on the epidemiology of pertussis in the United States. Before 1979, national pertussis surveillance by CDC was limited to data on the age and sex of each patient and the state reporting each case. These data were and continue to be reported in the *Morbidity and Mortality Weekly Report* (*MMWR*).

In the 3-year period, 1979-1981, the supplementary surveillance system received reports of 1,277 cases from 42 states. The largest numbers of cases were reported by Indiana (185), Washington (125), and New York (105).

Analysis of the data from this supplementary system indicates that 62% of the cases involved children <1 year of age, and that 79% of these cases were among children <6 months of age (Figure 1). The high percentage of cases found among <1-year olds by this supplementary system is similar to the 57% of pertussis cases in that age group reported in the *MMWR* for 1980 (*1*).

According to current recommendations of both the American Academy of Pediatrics (AAP) and the Immunization Practices Advisory Committee (ACIP), an infant should receive 3 doses of diphtheria-tetanus-pertussis (DTP) vaccine by 6 months of age and a fourth dose by 18 months of age in the absence of medical contraindications (*2,3*). Of 479 reported pertussis patients, ages 6 months-9 years,* with known vaccination status, 33% were not vaccinated with DTP before becoming ill, and 60% had received <3 doses.

Findings for the patients on whom clinical information was available showed that 72% had a whoop and 41% had apnea. Pneumonia was reported as a complication for 29% of patients (Table 1). The frequency of pneumonia was highest (34%) among infants <6 months of age. For patients <4 years of age, the likelihood of pneumonia was inversely related to the number of DTP doses (for children 0-5 months, $p = 0.009$; for children 6 months-4 years, $p = 0.025$.)†

Seizures were reported for 51 (4%) of 1,277 patients; 29 (56%) of these patients were <6 months of age. Among patients <4 years of age, the likelihood of developing seizures was also inversely related to the number of DTP doses received; however, the difference was not statistically significant. Encephalopathy was associated with 0.4% of cases. All patients reported to have encephalopathy were <1 year of age.

Fifty-eight percent of all reported patients were hospitalized, including 80% of infants <6

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*Vaccination histories for persons >9 years old were thought to be less reliable and were therefore not included in this analysis.

†Chi square test for linear trend, used for all statistical analyses.

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Pertussis – Continued

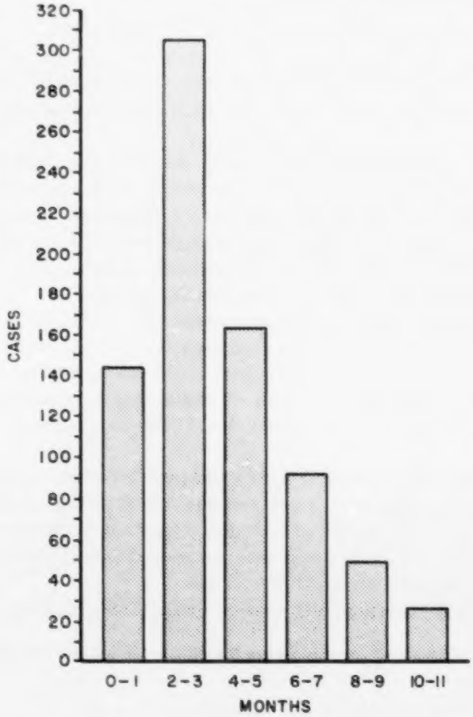
months of age, 60% of those 6-11 months of age, and 35% of those 1-4 years of age. Relatively few patients >4 years of age were hospitalized. The proportion of patients hospitalized was inversely related to the number of doses of DTP vaccine received; the highest proportion of patients hospitalized occurred among children who had received <3 doses of DTP vaccine ($p = 0.0046$ for 6- to 11-month olds and <0.0001 for 1- to 4-year olds).

Seven deaths (0.5%) associated with pertussis were reported. All deaths occurred among hospitalized patients who were <1 year of age, had not been vaccinated, and had pneumonia.

Laboratory confirmation of the diagnosis of pertussis was available for 72% of cases. The diagnosis was confirmed by direct fluorescent antibody (DFA) testing in 46% of cases, by DFA and culture in 18%, and by culture in 8%. The diagnosis was made on clinical grounds alone in 28% of cases.

Additional information about household contacts was available for 287 patients. To calculate vaccine efficacy, secondary attack rates were determined for unvaccinated household contacts (no DTP doses received) and for household contacts who were fully vaccinated (3 or more DTP doses). Vaccine efficacy for household contacts <5 years of age was 82.4%. Efficacy could not be calculated for children 5-9 years of age because very few household contacts in this age group were unvaccinated.

FIGURE 1. Age distribution of pertussis cases, United States, 1979-1981



Pertussis – Continued

Reported by Respiratory and Special Pathogens Br, Div of Bacterial Diseases, Center for Infectious Diseases, Surveillance, Investigations and Research Br, Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: During the recent controversy regarding pertussis vaccine, questions were raised as to whether the disease has caused sufficient morbidity and mortality, in recent years, to justify routine vaccine use. As with other vaccines, the decision to recommend use of DTP vaccine depends on the risk of developing disease, disease severity, vaccine efficacy, and adverse reactions associated with the vaccine.

Data from the CDC pertussis surveillance systems presented above provide information on the current morbidity and mortality due to pertussis in the United States and on the efficacy of currently used vaccines in both preventing and attenuating disease. They demonstrate that pertussis is a severe disease, particularly for children <1 year of age, and may be associated with seizures, encephalopathy, and death. The data also demonstrate that DTP vaccine is efficacious. More than 80% of children exposed to pertussis who have received at least 3 doses of DTP vaccine will be protected. Because, under the current ACIP vaccination schedule, children do not receive 3 doses of vaccine until 6 months of age, not all cases of pertussis in this age group are preventable. However, children who have received 1 or 2 doses of vaccine, if infected, tend to have milder illnesses than unvaccinated children of similar age. Furthermore, the risk of infection in the <6-month age group may also be reduced indirectly by high levels of vaccination in older children, and the resultant decreased transmission of disease.

As with most surveillance systems, underreporting is a problem. The supplementary system reported only 20% as many cases as were reported to the MMWR in 1979-1981. A disproportionate number of hospitalized, laboratory-confirmed, and classical cases may have been reported. Furthermore, a history of hospitalization may not indicate the same degree of disease severity for different age groups. Nevertheless, the data are useful for estimating the risks of disease and the benefits of vaccine usage.

TABLE 1. Pertussis cases with hospitalizations and other complications, by selected age groups and vaccination status, 1979-81, United States

	Vaccination status by number of doses							
Age groups	**0**		**1 or 2**		**≥3**		**Total[*]**	
Pneumonia								
0-5 mo	104/272[†]	38[§]	33/127	26	0	-	137/399	34
6-11 mo	8/44	18	11/39	28	1/18	6	20/101	20
1-4 yrs	17/50	34	12/36	33	5/41	12	34/127	27
Seizures								
0-5 mo	21/304	7	8/173	5	0/1	0	29/478	6
6-11 mo	5/59	8	3/56	5	0/26	0	8/141	6
1-4 yrs	1/68	1	2/51	4	1/94	1	4/213	2
Hospitalized								
0-5 mo	297/352	84	141/193	73	1/1	100	439/546	80
6-11 mo	46/67	69	36/60	60	12/29	41	94/156	60
1-4 yrs	36/78	46	28/58	48	19/99	19	83/235	35

[*] Total cases with data available on vaccine status and specified complication.

[†] Number of cases with complication/total number of cases of specified vaccination status in each age group for which complication status was known.

[§] Percentage with specified complication.

Pertussis – Continued

Two recent studies provide estimates of risks associated with DTP vaccination. Of 15,752 recipients of DTP vaccine, 64% reported local reactions, and 50% reported minor systemic reactions within 48 hours (*4*). The more serious reactions, such as convulsions noted in 9 children and hypotonic hyporesponsive episodes noted in 9 children, each occurrad at a frequency of 1/1,750 doses. Seventeen of the 18 children who had such reactions were examined by a physician shortly after the episode; all were found to be normal.

In Great Britain, 1,000 cases of neurologic illness were investigated by means of a case-control study to detect the occurrence of severe neurologic reactions following DTP vaccination (*5*). Neurologic illness attributable to DTP vaccination was estimated to occur at a frequency of 1/110,000 doses of DTP, and permanent neurologic residua to occur at a frequency of 1/310,000 doses.

In 1980, 95% of children in the United States had completed a primary series of vaccination by the time they entered school. Because of high levels of vaccine acceptance in the United States, the current risk of pertussis is low. However, the agent, *Bordetella pertussis*, continues to cause disease. Recent experience in Japan and Great Britain has demonstrated that a decline in vaccination level in a previously highly vaccinated population may result in resurgence of disease (*6, 7*). In addition to the data presented, formal cost-benefit analysis of pertussis and DTP vaccine also indicates that the benefits of vaccine continue to outweigh the risks (*8*). Both the ACIP and the AAP continue to recommend routine use of DTP vaccine.

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Medical Examiner Summer Mortality Surveillance — United States, 1979-1981

Sustained increases in summer temperature and humidity (heat waves) have been associated with extensive morbidity and mortality in the United States (*1-4*). Identification of high-risk groups and effective prevention measures for certain heat-related illnesses have allowed development of prevention programs (*2,5-13*). A pilot study designed to explore the utility and feasibility of using summer mortality statistics from medical examiners as a basis for indirect surveillance of heat-related illness was initiated in June 1981. The medical examiners of 16 major metropolitan areas, the National Climatic Center, and the National Weather Service provided CDC with the number of deaths each day and meteorologic measurements for the period June 1 - August 31, 1979-1981.

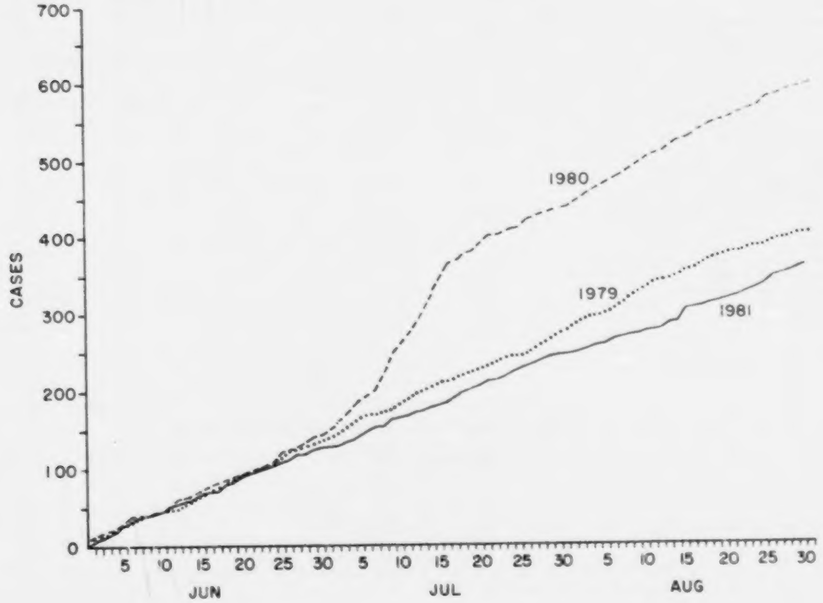
Summer Mortality Surveillance – Continued

Average July temperatures were within 4F (2.2C) of normal at all surveillance sites in 1979 and 1981, but were as high as 8F (4.4C) above normal in 1980 at several surveillance sites due to a severe and widespread heat wave in July 1980. Deaths reported by medical examiners rose in mid-July 1980 in areas in which other health effects related to heat were severe (Figure 2). The proportionate increase in deaths in July 1980 over those reported in July 1979 correlated poorly with the average maximum temperature for July 1980, even after adjustment for the effect of humidity, but correlated well with the upward departure from the normal July temperature for each surveillance site.

The striking increase in deaths recorded by medical examiners and noted in several cities in association with the onset of unusually high temperatures suggests that these mortality data are useful in the prompt detection of outbreaks of heat-related illness. Further work is required to quantify the specificity and sensitivity of this method. Data collection will continue during the summer of 1982.

Reported by LE Norton, MD, Office of the Jefferson County Medical Examiner, W Birch, DVM, State Epidemiologist, Alabama State Dept of Health; HH Karnitschnig, MD, Office of the Maricopa County Medical Examiner, JJ Sacks, MD, Acting State Epidemiologist, Arizona State Dept of Health Svcs; TT Noguchi, MD, Office of the Medical Examiner, Los Angeles, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; RR Stivers, MD, Office of the Fulton County Medical Examiner, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human Resources; P Lipkovic, MD, Office of the Medical Examiner, Jacksonville, RA Gunn, MD, State Epidemiologist, Florida State Dept of Health; F Finger, National Weather Service, Camp Springs, Maryland; WU Spitz, MD, Office of the Medical Examiner, Detroit, NS Hayner, MD, State Epidemiologist, Michigan State Dept of Health; B Peterson, MD, Office of the Jackson County

FIGURE 2. Cumulative deaths reported by medical examiners, Memphis, Tennessee, June-August 1979-1981



Summer Mortality Surveillance – Continued

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Editorial Note: Large increases in numbers of deaths from stroke and ischemic heart disease as well as deaths from more obviously heat-related illness (e.g., heatstroke) have been reported in association with heat waves (*14*). Deaths caused by these conditions are often sudden, unlikely to be witnessed by a physician, and therefore likely to be investigated by a medical examiner. A population-based study of heat-related morbidity and mortality in 2 midwestern

(Continued on page 343)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		25th WEEK ENDING			CUMULATIVE, FIRST 25 WEEKS		
		June 26 1982	June 27 1981	MEDIAN 1977-1981	June 26 1982	June 27 1981	MEDIAN 1977-1981
Aseptic meningitis		146	139	116	2,026	1,904	1,413
Brucellosis		1	3	5	67	69	82
Encephalitis:	Primary (arthropod-borne & unspec.)	26	19	19	375	358	308
	Post-infectious	2	3	4	38	47	102
Gonorrhea:	Civilian	17,798	19,358	20,192	430,049	468,185	452,235
	Military	251	670	499	12,434	13,950	12,844
Hepatitis:	Type A	354	431	578	10,394	12,293	13,734
	Type B	464	418	319	9,814	9,572	7,888
	Non A, Non B	43	N	N	1,027	N	N
	Unspecified	172	179	179	4,327	5,265	4,797
Legionellosis		5	N	N	184	N	N
Leprosy		1	1	2	86	103	81
Malaria		12	43	26	408	640	288
Measles (rubeola)		49	75	464	880	2,218	11,252
Meningococcal infections:	Total	36	48	48	1,671	2,078	1,564
	Civilian	35	48	48	1,664	2,070	1,548
	Military	1	–	1	7	8	11
Mumps		112	55	301	3,739	2,668	9,759
Pertussis		25	24	26	500	496	529
Rubella(German measles)		44	33	362	1,614	1,442	9,574
Syphilis (Primary & Secondary):	Civilian	668	620	488	15,609	14,384	11,574
	Military	8	5	5	194	181	146
Tuberculosis		488	506	655	12,247	12,646	13,162
Tularemia		13	10	6	75	89	70
Typhoid fever		6	7	8	178	226	210
Typhus fever, tick-borne (RMSF)		44	54	50	334	449	325
Rabies, animal		153	197	93	2,995	3,713	2,289

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	–	Poliomyelitis: Total	2
Botulism (Calif. 3)	37	Paralytic	2
Cholera	–	Psittacosis (Tenn. 1)	53
Congenital rubella syndrome	5	Rabies, human	–
Diphtheria	–	Tetanus(Calif. 1)	35
Leptospirosis	29	Trichinosis(Md. 1)	54
Plague	4	Typhus fever, flea-borne (endemic, murine)(Tex. 2)	14

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending June 26, 1982 and June 27, 1981 (25th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	146	67	375	38	430,049	468,185	354	464	43	172	5	86
NEW ENGLAND	6	3	15	4	10,454	11,501	12	27	3	22	-	1
Maine	3	-	-	-	490	563	2	3	-	-	-	-
N.H.	-	-	-	-	310	392	-	1	-	1	-	-
Vt.	-	-	-	-	212	200	-	-	-	-	-	-
Mass.	1	-	5	-	4,800	4,771	9	6	2	16	-	-
R.I.	2	-	-	-	722	602	-	3	1	-	-	-
Conn.	-	3	10	4	3,920	4,968	1	14	-	5	-	1
MID. ATLANTIC	11	-	50	9	54,555	53,758	21	75	1	10	1	4
Upstate N.Y.	3	-	19	3	8,806	9,076	2	13	1	1	-	1
N.Y. City	2	-	10	-	23,078	21,554	11	26	-	3	-	1
N.J.	5	-	10	-	9,794	10,562	8	36	-	6	1	1
Pa.	1	-	11	6	12,877	12,566	-	-	-	-	-	1
E.N. CENTRAL	13	-	76	7	58,034	73,309	54	56	-	20	3	3
Ohio	3	-	23	4	17,803	25,135	7	18	-	6	-	-
Ind.	6	-	15	2	7,477	6,513	13	6	-	3	-	-
Ill.	-	-	6	1	11,924	20,412	4	1	-	4	1	3
Mich.	3	-	30	-	15,011	14,946	28	29	-	7	2	-
Wis.	1	-	2	-	5,819	6,253	2	2	-	-	-	-
W.N. CENTRAL	6	7	23	3	21,158	22,189	28	14	2	4	-	1
Minn.	-	-	5	1	3,187	3,495	19	1	-	-	-	-
Iowa	3	1	10	1	2,268	2,405	-	5	-	2	-	-
Mo.	3	2	4	-	9,807	10,094	7	3	1	2	-	1
N. Dak.	-	-	-	-	285	314	-	-	-	-	-	-
S. Dak.	-	1	-	1	591	635	-	-	-	-	-	-
Nebr.	-	-	2	-	1,306	1,737	-	2	1	-	-	-
Kans.	-	3	2	-	3,714	3,509	2	3	-	-	-	-
S. ATLANTIC	23	15	56	6	103,890	115,015	48	96	14	23	-	5
Del.	-	-	-	-	1,756	1,705	1	5	-	-	-	-
Md.	2	-	13	-	14,588	12,406	4	19	4	2	-	2
D.C.	-	-	-	-	6,195	7,150	-	1	-	-	-	-
Va.	-	6	14	1	10,029	10,522	2	12	1	-	-	1
W. Va.	-	-	-	-	1,308	1,723	4	6	-	-	-	-
N.C.	4	-	4	1	18,444	17,796	2	4	-	6	-	-
S.C.	1	2	-	-	11,083	10,727	-	2	-	1	-	-
Ga.	-	1	-	-	9,483	23,779	4	18	-	1	-	-
Fla.	16	6	25	4	31,004	29,207	31	29	9	13	-	2
E.S. CENTRAL	9	7	20	2	37,528	38,508	21	21	1	4	-	-
Ky.	-	-	-	-	5,084	4,948	4	-	-	-	-	-
Tenn.	1	4	11	-	14,581	14,580	11	12	1	2	-	-
Ala.	8	2	6	2	11,136	11,763	2	8	-	2	-	-
Miss.	-	1	3	-	6,727	7,217	4	1	-	-	-	-
W.S. CENTRAL	36	19	44	1	62,247	61,623	62	45	-	43	-	10
Ark.	-	4	1	-	5,233	4,269	-	3	-	4	-	-
La.	1	2	6	-	11,524	9,756	7	6	-	2	-	-
Okla.	7	3	13	-	6,692	6,631	10	11	-	1	-	-
Tex.	28	10	24	1	38,798	40,967	45	25	-	36	-	10
MOUNTAIN	6	-	17	3	15,597	18,375	34	19	6	10	-	2
Mont.	-	-	-	-	636	639	1	1	-	-	-	-
Idaho	-	-	-	-	738	780	-	1	-	-	-	1
Wyo.	-	-	-	-	444	413	-	-	2	-	-	-
Colo.	2	-	7	1	4,092	4,909	5	7	1	3	-	-
N. Mex.	-	-	-	-	1,945	2,024	13	3	1	3	-	-
Ariz.	-	-	6	-	4,325	5,637	9	5	1	2	-	1
Utah	4	-	-	2	710	863	5	2	1	2	-	-
Nev.	-	-	4	-	2,707	3,110	1	-	-	-	-	-
PACIFIC	36	16	74	3	66,586	73,907	74	111	16	36	1	60
Wash.	-	-	7	-	5,445	6,124	7	8	2	3	1	6
Oreg.	1	-	1	-	3,702	4,647	6	8	-	1	-	-
Calif.	21	15	62	3	54,615	59,883	57	86	14	30	-	34
Alaska	-	1	3	-	1,656	1,839	-	5	-	-	-	1
Hawaii	14	-	1	-	1,168	1,414	4	4	-	2	-	19
Guam	U	-	-	-	42	64	U	U	U	U	U	-
P.R.	U	-	1	-	1,295	1,599	U	U	U	U	U	-
V.I.	-	-	-	-	93	82	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	36	211	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 26, 1982 and June 27, 1981 (25th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	12	408	49	880	2,218	36	1,671	112	3,739	25	44	1,614	1,442
NEW ENGLAND	-	22	-	9	72	3	90	5	148	-	-	14	104
Maine	-	-	-	-	5	-	4	1	33	-	-	-	33
N.H.	-	-	-	2	6	1	13	-	12	-	-	8	42
Vt.	-	-	-	2	2	1	6	-	5	-	-	-	-
Mass.	-	17	-	2	51	-	22	2	72	-	-	3	18
R.I.	-	1	-	-	-	-	11	1	13	-	-	1	-
Conn.	-	4	-	3	8	1	34	1	13	-	-	2	11
MID. ATLANTIC	1	55	11	141	733	6	301	9	234	6	2	78	173
Upstate N.Y.	-	14	6	99	193	1	97	3	45	3	1	38	71
N.Y. City	1	18	5	34	52	3	53	3	38	2	-	26	46
N.J.	-	16	-	4	50	1	63	2	35	-	1	14	46
Pa.	-	7	-	4	438	1	88	1	116	1	-	-	10
E.N. CENTRAL	4	29	4	54	72	4	199	44	2,058	3	2	143	305
Ohio	-	7	-	1	15	-	77	27	1,520	2	-	-	-
Ind.	-	1	-	2	8	1	20	-	33	-	2	26	105
Ill.	-	3	-	16	21	2	51	9	154	1	-	55	71
Mich.	4	16	4	35	27	1	40	8	275	-	-	42	31
Wis.	-	2	-	-	1	-	11	-	76	-	-	20	98
W.N. CENTRAL	1	13	3	38	7	1	70	23	495	1	1	57	73
Minn.	1	2	-	-	3	-	14	16	373	-	1	7	7
Iowa	-	5	-	-	1	-	5	-	29	-	-	-	4
Mo.	-	3	-	2	1	-	21	1	14	-	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	3	-	1	-	-	1	-
Nebr.	-	2	-	-	1	-	9	-	-	-	-	-	1
Kans.	-	1	3	36	1	1	12	6	78	1	-	11	59
S. ATLANTIC	1	59	-	33	319	3	333	6	211	7	1	61	117
Del.	-	-	-	-	-	-	-	4	10	1	-	1	1
Md.	-	7	-	2	1	1	21	-	21	-	-	31	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	-	22	-	14	6	-	36	-	30	-	1	11	3
W. Va.	-	3	-	2	8	-	7	-	80	-	-	1	22
N.C.	-	-	-	-	3	1	67	-	9	1	-	1	4
S.C.	-	3	-	-	-	-	39	1	12	2	-	1	8
Ga.	1	9	-	-	101	-	69	-	10	-	-	5	31
Fla.	-	12	-	14	199	1	92	1	39	3	-	10	47
E.S. CENTRAL	-	5	-	7	2	3	115	1	30	-	-	37	23
Ky.	-	4	-	1	-	-	19	-	9	-	-	21	14
Tenn.	-	-	-	5	-	2	46	-	11	-	-	-	8
Ala.	-	-	-	-	2	-	43	-	5	-	-	-	1
Miss.	-	1	-	1	-	1	7	1	5	-	-	16	-
W.S. CENTRAL	-	31	2	14	706	5	199	1	137	3	7	90	115
Ark.	-	3	-	-	1	-	12	-	6	-	1	1	2
La.	-	3	2	2	-	-	34	-	3	1	1	1	9
Okla.	-	3	-	-	5	1	17	-	-	-	-	3	-
Tex.	-	22	-	12	700	4	136	1	128	2	5	85	104
MOUNTAIN	1	10	-	5	31	1	83	3	55	5	-	50	68
Mont.	-	-	-	-	-	-	4	-	3	-	-	4	3
Idaho	-	-	-	-	1	-	6	-	3	1	-	-	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	5	1
Colo.	1	6	-	5	8	1	32	-	8	-	-	4	29
N. Mex.	-	2	-	-	8	-	12	-	-	-	-	5	5
Ariz.	-	1	-	-	4	-	14	1	24	4	-	7	17
Utah	-	1	-	-	-	-	7	-	11	-	-	16	3
Nev.	-	-	-	-	10	-	3	2	4	-	-	9	7
PACIFIC	4	184	29	579	276	10	281	20	371	-	31	1,084	464
Wash.	1	11	-	25	1	-	29	-	58	-	2	32	54
Oreg.	-	5	-	-	3	5	60	-	-	-	1	4	48
Calif.	3	166	29	550	270	5	180	19	300	-	28	1,040	357
Alaska	-	-	-	1	-	-	9	-	6	-	-	1	-
Hawaii	-	2	-	3	2	-	3	1	7	-	-	7	5
Guam	U	1	U	-	6	U	1	U	1	U	U	1	1
P.R.	U	4	U	63	195	U	5	U	39	U	U	4	3
V.I.	-	-	-	-	7	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 26, 1982 and June 27, 1981 (25th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	15,609	14,384	488	12,247	75	6	178	44	334	2,995
NEW ENGLAND	262	311	17	328	-	-	11	-	3	21
Maine	1	2	1	25	-	-	-	-	-	19
N.H.	1	12	-	10	-	-	-	-	-	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	184	207	11	219	-	-	8	-	1	-
R.I.	12	18	3	14	-	-	-	-	1	-
Conn.	63	59	2	53	-	-	1	-	1	2
MID. ATLANTIC	2,142	2,164	73	1,999	6	1	30	2	8	71
Upstate N.Y.	229	206	9	338	6	-	3	-	-	38
N.Y. City	1,280	1,307	33	748	-	-	19	-	-	-
N.J.	279	283	7	402	-	1	5	1	6	1
Pa.	354	368	24	511	-	-	3	1	2	32
E.N. CENTRAL	775	1,017	55	1,843	-	-	14	3	31	344
Ohio	145	128	5	300	-	-	6	3	30	53
Ind.	102	103	9	241	-	-	-	-	-	52
Ill.	343	571	22	727	-	-	3	-	1	167
Mich.	132	168	18	470	-	-	5	-	-	2
Wis.	53	47	1	105	-	-	-	-	-	70
W.N. CENTRAL	302	286	22	378	10	1	7	8	12	655
Minn.	56	101	3	66	-	1	4	-	-	105
Iowa	17	13	2	47	1	-	1	2	2	208
Mo.	183	147	6	170	6	-	1	3	5	65
N. Dak.	4	6	-	7	-	-	-	-	-	59
S. Dak.	-	2	2	16	-	-	-	-	-	47
Nebr.	8	3	-	15	1	-	-	-	-	78
Kans.	34	14	9	57	2	-	1	3	5	93
S. ATLANTIC	4,307	3,750	116	2,538	7	-	27	23	190	492
Del.	8	7	-	22	-	-	-	-	-	-
Md.	241	293	9	302	1	-	6	5	25	27
D.C.	257	311	6	103	-	-	-	-	-	-
Va.	314	367	24	305	1	-	2	2	20	249
W. Va.	16	9	-	69	-	-	3	1	4	24
N.C.	291	298	20	408	-	-	-	5	77	30
S.C.	227	252	-	233	4	-	3	7	47	25
Ga.	882	967	22	366	-	-	-	3	16	103
Fla.	2,071	1,266	35	730	1	-	13	-	1	34
E.S. CENTRAL	1,115	926	54	1,141	6	1	14	5	19	374
Ky.	61	48	11	292	-	-	-	-	-	77
Tenn.	299	363	8	376	4	-	2	3	11	241
Ala.	402	251	21	325	-	-	9	-	4	56
Miss.	353	264	14	148	2	1	3	2	4	-
W.S. CENTRAL	4,025	3,472	56	1,452	34	3	16	2	64	609
Ark.	106	67	10	146	20	-	1	-	11	82
La.	884	796	-	240	3	1	1	-	-	16
Okla.	83	85	3	209	11	-	2	1	31	115
Tex.	2,952	2,524	43	857	-	2	12	1	22	396
MOUNTAIN	401	360	10	350	8	-	6	1	6	106
Mont.	3	9	-	25	1	-	-	1	1	40
Idaho	19	14	-	14	1	-	-	-	1	1
Wyo.	10	7	-	2	1	-	-	-	1	10
Colo.	109	106	1	46	1	-	2	-	-	14
N. Mex.	69	71	5	66	-	-	-	-	1	10
Ariz.	92	80	4	144	-	-	3	-	-	26
Utah	12	14	-	17	4	-	1	-	-	3
Nev.	67	59	-	36	-	-	-	-	2	2
PACIFIC	2,280	2,098	85	2,218	4	-	53	-	1	323
Wash.	69	68	3	134	1	-	3	-	-	-
Oreg.	60	43	6	88	-	-	1	-	-	-
Calif.	2,079	1,943	72	1,800	3	-	48	-	1	254
Alaska	8	6	-	32	-	-	-	-	-	69
Hawaii	64	38	4	164	-	-	1	-	-	-
Guam	1	-	U	3	-	U	-	U	-	-
P.R.	273	327	U	157	-	U	1	U	-	24
V.I.	7	9	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending June 26, 1982 (25th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	693	473	155	31	14	20	62
Boston, Mass.	214	128	57	16	9	8	22
Bridgeport, Conn.	42	32	7	1	1	1	8
Cambridge, Mass.	24	18	6	-	-	-	1
Fall River, Mass.	31	24	7	-	-	-	3
Hartford, Conn.	71	51	15	4	1	-	6
Lowell, Mass.	27	21	5	1	-	-	2
Lynn, Mass.	16	11	3	2	-	-	-
New Bedford, Mass.	30	23	6	1	-	-	2
New Haven, Conn.	44	24	14	3	-	3	-
Providence, R.I.	67	49	11	3	-	4	6
Somerville, Mass.	8	4	4	-	-	-	-
Springfield, Mass.	40	25	8	1	-	2	6
Waterbury, Conn.	25	19	1	2	2	1	3
Worcester, Mass.	56	40	11	3	1	1	3
MID. ATLANTIC	2,420	1,559	556	170	58	37	91
Albany, N.Y.	41	27	8	3	-	3	-
Allentown, Pa.	19	16	3	-	-	-	1
Buffalo, N.Y.	105	66	27	5	5	2	6
Camden, N.J.	33	22	7	4	-	-	3
Elizabeth, N.J.	30	20	10	-	-	-	-
Erie, Pa.†	38	25	8	3	-	-	3
Jersey City, N.J.	45	36	11	1	-	1	3
N.Y. City, N.Y.	1,295	834	310	107	32	16	42
Newark, N.J.	72	28	28	9	2	5	5
Paterson, N.J.	25	15	4	3	3	-	-
Philadelphia, Pa.†	292	195	63	15	9	4	12
Pittsburgh, Pa.†	76	55	15	2	2	2	4
Reading, Pa.	26	18	7	1	-	-	2
Rochester, N.Y.	106	84	18	2	3	1	3
Schenectady, N.Y.	18	13	4	1	-	-	-
Scranton, Pa.†	21	17	3	1	-	-	-
Syracuse, N.Y.	81	57	15	5	2	2	-
Trenton, N.J.	34	28	5	1	-	-	1
Utica, N.Y.	28	21	7	-	-	-	2
Yonkers, N.Y.	27	22	1	3	-	1	2
E.N. CENTRAL	2,240	1,408	537	156	57	82	61
Akron, Ohio	59	45	9	-	2	3	-
Canton, Ohio	31	15	10	5	1	-	1
Chicago, Ill.	528	304	132	50	18	24	14
Cincinnati, Ohio	162	102	49	7	4	4	6
Cleveland, Ohio	189	116	51	15	4	3	-
Columbus, Ohio	137	88	31	13	2	5	8
Dayton, Ohio	95	53	33	7	3	3	2
Detroit, Mich.	230	135	55	26	5	11	3
Evansville, Ind.	68	45	5	7	3	2	2
Fort Wayne, Ind.	53	38	10	2	1	2	3
Gary, Ind.	29	18	6	4	1	2	1
Grand Rapids, Mich.	48	33	10	1	-	2	6
Indianapolis, Ind.	163	106	35	10	7	1	1
Madison, Wis.	39	28	4	1	-	6	2
Milwaukee, Wis.	131	92	25	4	2	4	1
Peoria, Ill.	43	29	7	2	-	5	2
Rockford, Ill.	43	29	7	2	1	4	1
South Bend, Ind.	46	29	14	2	1	-	3
Toledo, Ohio	92	66	22	2	2	-	3
Youngstown, Ohio	54	41	10	2	-	1	2
W.N. CENTRAL	712	475	147	25	27	33	26
Des Moines, Iowa§	54	52	-	-	1	-	-
Duluth, Minn.	36	27	8	-	-	1	1
Kansas City, Kans.	33	19	10	1	3	-	-
Kansas City, Mo.	126	84	24	5	7	6	9
Lincoln, Nebr.	21	15	1	3	1	1	1
Minneapolis, Minn.	84	48	25	4	3	4	-
Omaha, Nebr.	85	55	24	3	2	1	-
St. Louis, Mo.	132	85	21	7	2	17	8
St. Paul, Minn.	74	49	17	2	3	1	2
Wichita, Kans.	69	41	17	4	5	2	5

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,100	657	273	64	36	50	42
Atlanta, Ga.	143	79	39	12	4	9	5
Baltimore, Md.	201	118	45	20	11	3	4
Charlotte, N.C.	53	25	16	6	1	5	1
Jacksonville, Fla.	118	80	25	5	3	1	5
Miami, Fla.	89	47	28	8	3	5	4
Norfolk, Va.	44	28	8	3	1	4	1
Richmond, Va.	55	33	15	-	3	4	3
Savannah, Ga.	22	16	5	-	1	-	5
St. Petersburg, Fla.	80	72	7	1	-	-	1
Tampa, Fla.	75	48	17	5	1	4	5
Washington, D.C.	177	84	56	13	8	14	6
Wilmington, Del.	43	27	8	7	-	1	2
E.S. CENTRAL	625	353	161	47	14	24	24
Birmingham, Ala.	114	65	28	9	3	9	1
Chattanooga, Tenn.	51	32	6	7	2	4	3
Knoxville, Tenn.	39	27	5	2	1	-	-
Louisville, Ky.	111	65	30	5	4	7	6
Memphis, Tenn.	112	77	23	10	-	2	10
Mobile, Ala.	49	28	15	4	1	1	1
Montgomery, Ala.	57	39	14	2	1	1	2
Nashville, Tenn.	106	60	36	8	2	-	1
W.S. CENTRAL	1,226	764	315	91	69	46	32
Austin, Tex.	40	24	9	5	-	2	1
Baton Rouge, La.	54	41	8	2	2	1	-
Corpus Christi, Tex.	23	17	4	2	-	-	-
Dallas, Tex.	179	94	50	13	14	8	-
El Paso, Tex.	61	38	12	4	4	2	3
Fort Worth, Tex.	84	43	21	6	5	3	6
Houston, Tex.	288	142	83	32	18	13	4
Little Rock, Ark.	56	30	16	5	2	5	2
New Orleans, La.	150	99	33	10	5	3	-
San Antonio, Tex.	139	76	41	8	10	6	7
Shreveport, La.	53	34	12	1	5	1	1
Tulsa, Okla.	97	68	20	3	4	2	8
MOUNTAIN	630	407	140	42	22	29	21
Albuquerque, N.Mex.	45	32	12	-	1	-	2
Colo. Springs, Colo.	38	20	12	2	2	2	3
Denver, Colo.	133	85	26	13	1	8	9
Las Vegas, Nev.	92	49	20	11	9	3	1
Ogden, Utah	21	16	4	1	-	-	-
Phoenix, Ariz.	149	94	38	8	3	8	3
Pueblo, Colo.	26	19	4	1	2	-	1
Salt Lake City, Utah	44	26	9	3	4	2	-
Tucson, Ariz.	88	66	17	3	-	2	2
PACIFIC	1,791	1,265	357	123	63	43	94
Berkeley, Calif.	31	22	5	2	2	-	1
Fresno, Calif.	52	35	12	4	1	-	5
Glendale, Calif.	20	18	-	2	-	-	1
Honolulu, Hawaii	64	38	15	9	2	-	8
Long Beach, Calif.	98	68	26	1	1	-	5
Los Angeles, Calif.	463	325	58	38	14	10	14
Oakland, Calif.	77	54	15	4	-	4	3
Pasadena, Calif.	28	19	5	2	-	2	-
Portland, Oreg.	127	100	16	4	2	5	6
Sacramento, Calif.	94	56	20	12	5	3	10
San Diego, Calif.	147	93	36	6	9	3	15
San Francisco, Calif.	166	112	30	13	7	4	3
San Jose, Calif.	174	115	39	9	7	4	16
Seattle, Wash.	138	89	24	12	8	5	4
Spokane, Wash.	56	37	11	4	2	2	2
Tacoma, Wash.	38	26	7	1	3	1	1
TOTAL	11,457††	7,321	2,641	773	360	360	453

---

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Summer Mortality Surveillance – Continued

cities in 1980 showed that numbers of cases reported to medical examiners increased to a proportionately greater extent than did other indirect measures of impact on community health, e.g., total mortality, emergency room visits, and hospital admissions (*2*).

Surveillance of mortality data from medical examiners is simple, timely, and relatively inexpensive. Information that reflects the health of an entire city is rapidly available from a single source. Even the time required for post-mortem diagnosis does not delay collection of data.

Groups at high risk of having heatstroke are the elderly, infants < 1 year of age, military recruits, persons exposed to high temperatures in the work place, the chronically ill or bedfast, the mentally ill, those taking antipsychotic or anticholinergic drugs, and alcoholics (*2,5-7,9-12*). Low socioeconomic status and residence in an urban area have also been associated with high risk of heatstroke (*2,9*). Studies of race and sex as predisposing factors for heatstroke have yielded inconsistent results (*4,8,9*). Deaths from heatstroke reflect 10%-50% of the increase in mortality associated with unusually high temperatures (*2,14*). Less is known about the risk factors for deaths not associated with heatstroke during a heat wave.

During a heat wave, prevention programs are best targeted toward persons at high risk of having heatstroke. Having home air conditioning and spending increased time in air-conditoned places have been associated with decreased risk, suggesting that air-conditioned heat wave shelters are of benefit. Reducing physical activity during hot weather has also been associated with decreased risk (*5*).

Adequate fluid intake is important in reducing the risk of having heatstroke (*5,13*). Although adequate salt intake with meals is important, salt tablets are of doubtful benefit and should not be taken unless prescribed by a physician (*13*). Alcohol consumption should be reduced or eliminated during very hot weather.

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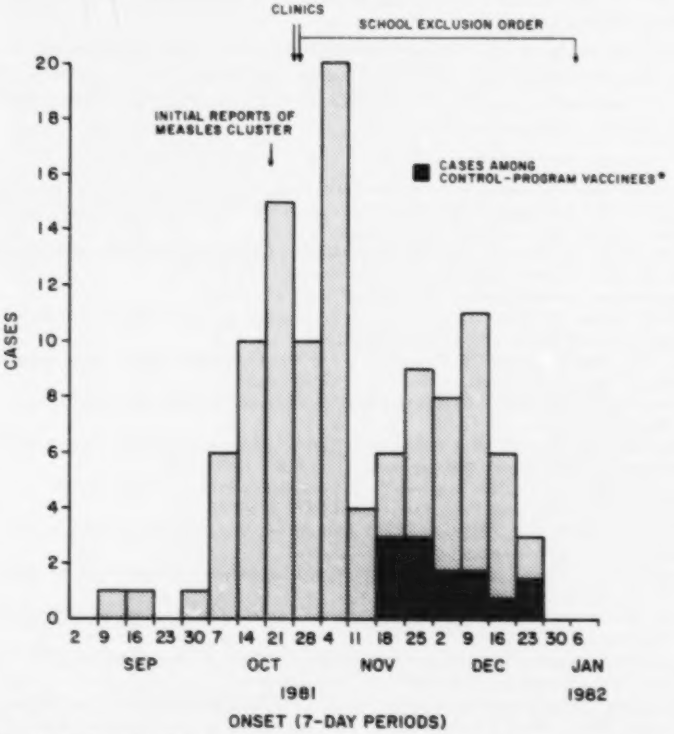
Epidemiologic Notes and Reports

A Continuing Measles Outbreak among School-Age Children Despite an Outbreak-Control Program with School Exclusion — Pennsylvania

In the 4-month period, September 9-December 27, 1981, 111 cases of measles were reported among school children in Warren County, Pennsylvania (Figure 3). Nine of these cases were confirmed by serologic tests. An additional 45 related cases were reported in the rest of the community. Health authorities were first notified 6 weeks after the first patient had rash onset; they promptly initiated school-record reviews in preparation for mass vaccination clinics and exclusion from school of noncompliant susceptible students. Of the county's 8,315 students, 39% (3,210) were identified as lacking adequate proof of immunity.* At the

FIGURE 3. Measles cases in school children, by onset of symptoms, Warren County, Pennsylvania, September 9-December 27, 1981



*Those with onset > 2 weeks after vaccination.

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*Pennsylvania State Health Department criteria for adequate proof of immunity to measles consist of either a documented history of live-measles vaccine received on or after the first birthday or of detectable measles-specific antibody on serologic testing.

Measles – Continued

time of the school exclusion order, 22% (728) of the students identified as being potentially susceptible furnished an updated record of vaccination, 73% (2,336) were vaccinated (most of them in control-program school clinics on October 28 and 29) and the other 5% (146) were excluded from school as of October 29.

Of the 111 cases among school children, 46 occurred more than 2 weeks after the control program was implemented, even though school records for these students indicated that all 46 had been vaccinated >2 weeks before becoming ill. Thirteen of these children from 3 schools had been vaccinated at control-program clinics; 10 of the 13 were from the same school. At these 3 schools, the measles attack rate was significantly higher for students vaccinated in control-program clinics (13 of 267, 5%) than for students who already had records of adequate vaccination before the outbreak-control program began (19 of 990, 2%)($p<0.01$). The 13 children who had been vaccinated during the control program but had measles disease during the outbreak were among 362 students of a high school and 4 elementary schools who had been vaccinated by a single jet-injector team (team A) at control-program clinics on October 28. No cases were reported among the 1,771 students vaccinated on that date by 4 other jet-injector teams or by several needle-and-syringe teams.

A seroprevalence survey was done in order to investigate the extent of apparent vaccination failures. Blood samples were collected from 115 of the 128 clinic vaccinees who were attended by team A at the 4 elementary schools but did not become ill and from 85 of the 101 vaccinees at selected elementary schools each attended by 1 of 3 other jet-injector teams. Students vaccinated by team A had a significantly higher rate of vaccination failure[†] than did children vaccinated by the other jet-injector teams (37% vs 6%, $p<0.001$).

Control-program vaccination teams had all used vials from the same vaccine lot except team A, which had used some vials of vaccine of another lot as well; these particular vials from the other lot had been handled differently from other control-program vaccine. Records were not available on vaccine vial usage by team A in each school.

To evaluate possible differences in vaccination technique among jet-injector teams, students participating in the serosurvey from 2 schools at which vaccinations were given by team A and from 3 comparison schools were questioned about their experiences with vaccination in the control program. Students vaccinated by team A stated that they had experienced significantly less pain (36% vs 75%, $p<0.001$) and bleeding at the site of vaccination (6% vs 62%, $p<0.001$) than did students vaccinated by other teams.

To assess other factors (among the remaining 33 of the 46 patients) that might have been associated with students' susceptibility to measles after the control-program was implemented, a case-control study was done to examine such variables as age at vaccination and whether school records could be documented by the purported sources of vaccination. Cases were defined as measles illness occurring >2 weeks after the control program among the 33 students who had not been vaccinated at control-program clinics; controls were randomly chosen from classmates of ill students who also had not been vaccinated during the control program and who had not become ill. Three times as many children who contracted measles had school records of measles vaccination that could not be documented by physicians or clinics than did their well classmates. Of the students with physician-documented vaccination records, relatively more of those who contracted measles disease than well classmates had been vaccinated before 12 months of age (with school records in error) or at 12 months of age, rather than at ≥15 months of age.

[†] Vaccination failures were defined as measles cases among clinic vaccinees or the absence of detectable hemagglutination-inhibition antibody in blood specimens collected from clinic vaccinees.

Measles – Continued

Thus, of the 46 students who became ill >2 weeks after the control-program was implemented, 13 (28%) had been vaccinated by team A, 13 (28%) did not have physician-documented records of vaccination, 2 (5%) had been vaccinated before 12 months of age, and 11 (24%) had been vaccinated at 12 months of age; no specific reason for remaining susceptible to measles could be identified for the other 7 (15%).

The Pennsylvania Department of Health has taken the necessary steps to provide live-measles vaccine to those students found to be seronegative in the seroprevalence survey.

Reported by C Butler, RN, L Deiter, P Spencer, RN, C Stading, P Strickland, B White, RN, R Gens, MD, Acute Infectious Disease Div, EJ Witte, VMD, State Epidemiologist, Pennsylvania Dept of Health; Surveillance, Investigations, and Research Br, Immunization Div, Center For Prevention Svcs, CDC.

Editorial Note: In school settings, the recommended measures for controlling measles outbreaks include the rapid identification and vaccination of susceptible individuals at risk and exclusion from school of students who lack adequate evidence of immunity.‡

Generally, reports of new cases of measles decline markedly within 2 weeks of implementing a school exclusion order and transmission among students ends shortly thereafter (*1,2*). The outbreak in Pennsylvania was unusual in that transmission persisted for more than 8 weeks after control-program clinics were held and exclusion of noncompliant students was implemented.

There appeared to be at least 3 reasons for the continued transmission. First, vaccination by team A was significantly less effective than vaccination by the other teams. This lower efficacy may have been caused by administration of impotent vaccine, poor vaccine administration technique (e.g., unrecognized jet-injector malfunction), or some combination of the two. Proper handling of vaccine should not be taken for granted, and persons using vaccine should follow the manufacturer's instructions carefully. It appears unlikely that measles transmission would have continued in the county's schools for such an extended period if these operational problems had not occurred.

Second, some school records were found to be inaccurate. Ideally, vaccination records should be verified by health-care providers when students first enter school. Third, these data indicate that persons vaccinated at 12 months of age are at higher risk of contracting measles than those who are older when vaccinated. These results are consistent with those of previous studies (*3*). Persons vaccinated at 12 months are not routinely revaccinated because their estimated level of protection (80%-95%) has been considered adequate.

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‡Generally considered a documented history of live-measles vaccine on or after the first birthday or of physician-diagnosed measles disease.

Poliomyelitis Update — Jamaica

As of June 23, 1982, a total of 54 suspected cases of paralytic poliomyelitis, including 1 death, had been reported from Jamaica. Onset of the first case occurred in late March 1982. Type I poliovirus has been isolated in 8 cases. Forty-eight persons were from Cornwall County; of these, 44 were from St. James Parish. Eighty-three percent (42) occurred in the <15-year age group. Of 37 suspect cases from whom previous vaccination status could be

Poliomyelitis – Continued

elicited, 29 had never received any polio vaccine; three had had 1 dose; two, 2 doses, and three, 3 doses. Cases have occurred predominantly among children living in crowded households with limited access to water and with substandard or absent sanitation facilities. Immunization status data suggest that 45% of Jamaican children who reached age 1 during 1981 had received a primary series of 3 doses of trivalent oral poliovirus vaccine (OPV) compared with 25% in 1980 and 20% in 1979.

Onset of illness for 35 patients was before June 1, 1982, the date when an island-wide immunization program began. In 13 parishes the program delivered 1 dose of OPV each to an estimated 70%-80% of children 6 weeks through 4 years of age and to 80%-90% of the 5-14 year age group by June 21, 1982. In addition, an estimated 40%-55% of the population 15 years and older each received a dose of OPV. The second round of OPV immunization, targeted to the most susceptible age group, 6 weeks through 14 years of age, is planned to begin during the first week of July. Between June 1 and June 23 an average of 6 cases occurred each week; no cases of poliomyelitis in travelers to Jamaica have been reported.

Reported by Ministry of Health, Jamaica; Viral Diseases Div, Center for Infectious Diseases, Immunization Div, Quarantine Div, Center for Prevention Svcs, CDC.

Editorial Note: The last outbreak of poliomyelitis in Jamaica occurred in 1964 and was associated with type I poliovirus. Since then no cases had been reported to the Ministry of Health.

In the present outbreak, the occurrence of cases following the immunization campaign is not unexpected because the incubation period for poliomyelitis may range up to 21 days and because of the time period required for the campaign. Prompt recognition of poliomyelitis outbreaks and intense immunization programs with OPV that have achieved high coverage in a short period of time (as in Jamaica) have been successful in markedly decreasing transmission of the wild poliovirus and in controlling poliomyelitis outbreaks (*1,2*).

Proof of diphtheria, measles, rubella, and poliomyelitis immunization is not required for international travel to or from any country. However, travelers to any country in which these diseases are endemic or epidemic should be protected. For travel to any country with poliomyelitis, adequate protection in unvaccinated or partially vaccinated travelers can be achieved by completion of a primary series with poliomyelitis vaccine as detailed in the ACIP recommendations published in MMWR Vol. 31, January 29, 1982. Travelers who have previously completed a primary series may wish to receive another dose of OPV or inactivated poliovirus vaccine (IPV).

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The Morbidity and Mortality Weekly Report, circulation 108,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

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Erratum, Vol. 31, No. 22

p301. In the article "Plague Vaccine," there is only one table. Because of its position in the issue, it is designated as Table 2. All text references in that article should be to Table 2. Thus, on page 303 in the section *Primary Vaccination*, under *Children ≤ 10 years old*, the reference should be to Table 2—not Table 1 as printed.

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MMWR

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Recommendation of the Immunization Practices Advisory Committee (ACIP)

Influenza Vaccines 1982-1983

This revision of the influenza vaccine recommendations updates information on influenza activity in the United States for the 1981-1982 influenza season (superseding MMWR 1981;30:279-88) and provides information on the vaccine to be available for the 1982-1983 influenza season.

INTRODUCTION

Influenza virus infections occur every year in the United States but vary greatly in incidence and geographic distribution. Infections may be asymptomatic, or they may produce a spectrum of manifestations ranging from mild upper-respiratory infection to pneumonia and death. Influenza A and B viruses are responsible for only a small proportion of all respiratory disease, but they are unique in their ability to cause periodic widespread outbreaks of febrile respiratory illness among adults and children.

Influenza epidemics are frequently associated with deaths in excess of the number normally expected. More than 200,000 excess deaths are estimated to have occurred in association with influenza epidemics in the United States during 1968-1981. Excess deaths in this period were attributable mainly to influenza A viruses, although influenza B epidemics were occasionally associated with excess deaths, as in 1979-1980. Epidemics of influenza B, and to a lesser extent of influenza A, infection have been associated with an increased incidence of Reye syndrome among children and adolescents in the United States.

Efforts to reduce the impact of influenza in the United States have been aimed at protecting persons at greatest risk of serious illness or death. Observations during influenza epidemics indicate that most influenza-related deaths occurred among chronically ill children and adults and older persons, especially those >65 years old. Annual vaccination is therefore recommended for these medically high-risk persons.

Influenza A viruses are classified into subtypes on the basis of 2 antigens: hemagglutinin (H) and neuraminidase (N). Three subtypes of hemagglutinin (H1,H2, H3) and 2 subtypes of neuraminidase (N1, N2) are recognized among influenza A viruses that have caused widespread human disease. Immunity to these antigens, especially hemagglutinin, reduces the likelihood of infection and the severity of disease if a person does become infected. However, there may be sufficient antigenic variation (antigenic drift) within the same subtype over time so that infection or vaccination with 1 strain may not induce immunity to distantly related strains. Although influenza B viruses have shown much more antigenic stability than influenza

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Influenza Vaccines – Continued

A viruses, antigenic variation does occur. As a consequence, the characteristics of antigenic properties of current strains provide the basis for selecting virus strain(s) to be included in the vaccine.

During the 1981-1982 winter, influenza activity was generally low in the United States, with no apparent peaks of excess mortality. Less than half the usual number of virus isolates were reported to CDC. In many states, influenza B viruses were shown to be the cause of localized outbreaks among school-age children. Several nursing-home outbreaks, some with associated mortality, were also confirmed to be caused by influenza B viruses. The strains of virus isolated were closely related antigenically to B/Singapore/222/79. Sporadic illnesses and a few focal outbreaks caused by influenza A(H1N1) viruses also occurred among children and young adults, but these viruses were less prevalent than influenza B. Influenza A(H1N1) isolates were, as in 1980-1981, similar to A/England/333/80, which can be shown by laboratory tests to be slightly different from A/Brazil/11/78, the current vaccine strain. Measurement of antibody responses of persons receiving vaccines containing A/Brazil/11/78 antigen, however, indicates that these vaccines should protect against A/England/333/80-like H1N1 strains. Most information about strains of influenza A(H3N2) likely to be prevalent in 1982-1983 is derived from reports and analyses of viruses isolated in 1981 in Asia. There was little circulation of H3N2 strains in the Americas or Europe during the 1981-1982 influenza season. In 1981, most influenza A(H3N2) virus isolates from Asia and the Southern Hemisphere were similar to strains circulating previously. Some additional variants were identified, but they did not become predominant at any time during the year or appear to cause any epidemics.

INFLUENZA VACCINES FOR 1982-1983

The specific antigens and their potency in the vaccine will be the same as in 1981-1982: 15 μg each of hemagglutinin of A/Brazil/78(H1N1), A/Bangkok/79(H3N2), and B/Singapore/79 viruses per 0.5-ml dose.

Adults and children ≥13 years old will require only 1 dose. Children <13 years old are less likely than older children or adults to have been previously infected with strains related to each of the vaccine components. Therefore, because of their potentially lower level of immunologic priming, children in the <13-year age group should receive 2 doses of vaccine. However, children who have already had at least 1 of the influenza vaccines recommended for use from 1978 to 1982 will require only 1 dose of the 1982-1983 vaccine. The 1982-1983 vaccines will be available as whole-virion (whole-virus) and sub-virion (split-virus) preparations. Past data indicate that split-virus vaccines have been associated with somewhat fewer side effects than whole-virus vaccines among children. Thus, only split-virus vaccines are recommended for persons <13 years old.

VACCINE USAGE

General Recommendations

Annual vaccination is strongly recommended:

1. For all persons (children and adults) who are at increased risk of adverse consequences from infections of the lower respiratory tract because of a pre-existing medical condition.

   Conditions predisposing to such increased risk include:

   a) Acquired or congenital heart disease with actual or potentially altered circulatory dynamics (e.g., mitral stenosis, congestive heart failure, or pulmonary vascular overload).

Influenza Vaccines – Continued

- b) Any chronic disorder or condition that compromises pulmonary function (e.g., chronic obstructive pulmonary disease, bronchiectasis, heavy smoking, tuberculosis, severe asthma, cystic fibrosis, neuromuscular and orthopedic disorders with impaired ventilation, residual pulmonary dysplasia following the neonatal respiratory distress syndrome).
- c) Chronic renal disease with azotemia or nephrotic syndrome.
- d) Diabetes mellitus or other metabolic diseases that increase the risk that infections will be more severe than for persons without such conditions.
- e) Chronic, severe anemia, such as sickle cell disease.
- f) Conditions that compromise the immune mechanism, including certain malignancies and immunosuppressive therapy.

2. For all older persons, particularly those >65 years old, because the risk of death during influenza outbreaks generally increases with age.

In balancing the benefits, risks, and costs for the community, some localities have elected to vaccinate persons who provide essential community services and medical-care personnel who also are at increased risk of exposure. Uniform recommendations cannot be made in this regard. However, vaccination programs for groups who provide community services should not take precedence over vaccination of persons specified to be at high risk.

Table 1 summarizes vaccine and dosage recommendations by age group for 1982-1983.

Use in Pregnancy

Physicians should evaluate a pregnant woman's need for influenza vaccination on the same basis used for other persons; that is, vaccination should be advised for a pregnant woman who has any underlying high-risk condition. Only in the pandemics of 1918-1919 and 1957-1958 was there persuasive evidence that influenza infection increased maternal mortality.

There is no evidence to suggest that influenza vaccine carries any maternal or fetal risk, and, because it is inactivated, the vaccine does not share any of the theoretical risks of live-virus-vaccine infection of the fetus. Nonetheless, when vaccine is to be given in pregnancy, waiting until the second or third trimester is a reasonable precaution to minimize any concern over teratogenicity.

Side Effects and Adverse Reactions

Vaccines used in recent years have generally been associated with only a few reactions; less than one-third of vaccinees have been reported to have local redness and induration for 1 or 2 days at the site of injection.

TABLE 1. Influenza vaccine[*] dosage, by age, 1982-1983

Age group	Product	Dosage	Number of doses
≥13 years	Whole virion (whole virus) or sub-virion (split virus)	0.5 ml	1
3-12 years	Sub-virion (split virus)	0.5 ml	2[†]
6-35 months	Sub-virion (split virus)	0.25 ml[‡]	2[†]

[*] Contains 15 μg each of A/Brazil/78(H1N1), A/Bangkok/79(H3N2), and B/Singapore/79 hemagglutinin antigens in each 0.5 ml.

[†] Four weeks or more between doses; both doses recommended for good protection. However, if the individual received at least 1 dose of any influenza vaccine recommended from 1978-79 to 1981-82, one dose is sufficient.

[‡] Based on limited data. Since the likelihood of febrile convulsions is greater for this age group, special care should be taken in weighing relative risks and benefits.

Influenza Vaccines – Continued

Systemic reactions have been of 3 types:

1. Fever, malaise, myalgia, and other systemic symptoms of toxicity, although infrequent, most often affect children and others who have had no experience with the influenza virus antigens contained in the vaccine. These reactions, which begin 6-12 hours after vaccination and persist 1-2 days, are usually attributed to the influenza virus itself (even though it is inactivated) and constitute most of the side effects of influenza vaccination.

2. Immediate, presumably allergic, responses such as flare and wheal or various respiratory expressions of hypersensitivity occur extremely rarely after influenza vaccination. They probably result from sensitivity to some vaccine component—most likely residual egg protein. Although current influenza vaccines contain only a small quantity of egg protein, on rare occasions they can induce hypersensitivity reactions. Individuals with anaphylactic hypersensitivity to eggs should not be given influenza vaccine. This would include persons who, on eating eggs, develop swelling of the lips or tongue or experience acute respiratory distress or collapse.

3. In 1976, a temporal association (i.e., within 10 weeks of vaccination) was noted between Guillain-Barré syndrome (GBS) and administration of A/New Jersey/76 (swine) influenza vaccine. Vaccinated adults had an excess frequency of GBS at the rate of approximately 10 cases/1 million persons vaccinated. This incidence of GBS was 5-6 times higher than the comparable average reported incidence for unvaccinated persons. An active surveillance system for GBS was initiated in 1978 and was maintained for 3 years. No significant excess risk of GBS was found for recipients of influenza vaccine. Available evidence indicates that any risk of GBS from influenza vaccine appears to be far lower than the risks associated with influenza among persons for whom the vaccine is indicated.

SUPPLEMENTARY MEASURES

Annual vaccination continues to be the most important way to prevent influenza and should be routine for all persons at high risk of serious and/or fatal disease. Supplementary measures intended to reduce the likelihood of exposure in community outbreaks, such as limiting the number of gatherings of large groups, may delay spread but are not uniformly effective.

Amantadine hydrochloride, an antiviral drug, can play a supplementary role in helping prevent influenza A for certain persons and circumscribed groups. It is not a substitute for vaccine and not generally applicable to public health practice, but it may be useful for persons who need protection but have not been vaccinated.

Amantadine protects only against influenza A, not influenza B, infection and must be taken each day for the duration of the epidemic (6-8 weeks, generally) or until active immunity can be expected to develop (about 10-14 days after vaccination). Precautions must be taken for patients with certain chronic conditions, and there are sometimes mild but occasionally troublesome side effects—especially among older patients. Amantadine, a prescription drug, must be ordered and monitored by a physician. Dosage, precautions, and other information on use are specified in the drug's labeling.

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Influenza Vaccines – Continued

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Epidemiologic Notes and Reports

Opportunistic Infections and Kaposi's Sarcoma among Haitians in the United States

Reports of opportunistic infections and Kaposi's sarcoma among Haitians residing in the United States have recently been received at CDC. A total of 34 cases in 5 states have been reported to date.

Florida: From April 1, 1980, through June 20, 1982, 19 Haitian patients admitted to Jackson Memorial Hospital, Miami, had culture, biopsy, or autopsy evidence of opportunistic infections, and 1 other patient had biopsy- and autopsy-confirmed Kaposi's sarcoma. The infections identified included *Pneumocystis carinii* pneumonia (6 patients), cryptococcal meningitis or fungemia (4), toxoplasmosis of the central nervous system (CNS) (7), *Candida albicans* esophagitis (7) and thrush (5), esophageal or disseminated cytomegalovirus infection (3), progressive herpes simplex virus infection (1), disseminated tuberculosis (8), and chronic enteric *Isospora belli* infection (2). Fourteen patients had multiple opportunistic infections. Three patients had recurring infection. The clinical course has been severe; 10 patients have died. The type of infection was initially recognized at autopsy for 6 patients.

The 20 patients ranged in age from 22 to 43 years (mean 28.4 years); 17 were males. All the patients had been born in Haiti and had resided in the Miami-Dade County area for periods ranging from 1 month to 7 years (median 20.5 months).

When initially seen, 18 of the 20 patients had peripheral lymphopenia (< 1,000 lymphocytes/mm^3). Skin tests performed on 17 patients with various combinations of tuberculin, mumps, streptokinase/streptodornase, *Candida*, and *Trichophyton* antigens were all negative. Immunologic studies at CDC on specimens from the 11 patients tested showed severe T-cell

Opportunistic Infections – Continued

dysfunction. Monoclonal antibody analysis of peripheral-blood T-cell subsets revealed a marked decrease of the T-helper cell subset with inversion of the normal ratio of T-helper to T-suppressor cells.

Of the 7 patients with histologically confirmed toxoplasmosis of the CNS, 5 have died. Because there was no history of underlying conditions or drugs associated with immunosuppression, CNS toxoplasmosis was not considered in the premortem diagnosis of the first 4 cases. Pathology findings for all these patients were confirmed with an immuno-peroxidase method for toxoplasmosis and, in one instance, with electron microscopy as well. Tachyzoites were the predominant form of the parasite observed; encysted forms were rare or absent in many tissue blocks.

In addition to the 20 cases reported from Miami, a Haitian female from Naples, Florida, was reported to have *P. carinii* pneumonia.

New York. From July 1, 1981, through May 31, 1982, 10 Haitian residents of Brooklyn were diagnosed as having the following opportunistic infections: *P. carinii* pneumonia (5 patients), CNS toxoplasmosis (2), disseminated cryptococcosis (1), esophageal candidiasis (1), and disseminated tuberculosis (2). None had any underlying disease or history of therapy known to cause immunosuppression. Five died of their infections.

All 10 patients were males and ranged in age from 22 to 37 years. Eight stated they were heterosexual; the sexual orientation of the other 2 was not known. One patient gave a history

(Continued on page 360)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE	26th WEEK ENDING			CUMULATIVE, FIRST 26 WEEKS		
	July 3, 1982	July, 4 1981	MEDIAN 1977-1981	July, 3, 1982	July, 4 1981	MEDIAN 1977-1981
Aseptic meningitis	99	141	135	2,125	2,045	1,548
Brucellosis	6	6	3	73	75	86
Encephalitis: Primary (arthropod-borne & unspec.)	10	15	18	385	373	326
Post-infectious	2	3	4	40	50	106
Gonorrhea: Civilian	14,245	18,569	18,569	446,168	486,754	471,737
Military	199	669	565	12,633	14,619	13,493
Hepatitis: Type A	386	494	529	10,794	12,787	14,341
Type B	295	409	290	10,129	9,981	8,178
Non A, Non B	21	N	N	1,048	N	N
Unspecified	144	220	176	4,475	5,485	4,973
Legionellosis	8	N	N	191	N	N
Leprosy	4	6	6	90	109	82
Malaria	13	24	18	421	664	302
Measles (rubeola)	15	52	398	895	2,270	11,650
Meningococcal infections: Total	50	54	41	1,729	2,132	1,605
Civilian	49	54	40	1,721	2,124	1,588
Military	1	-	-	8	8	11
Mumps	52	52	226	3,794	2,720	9,985
Pertussis	24	16	28	523	512	563
Rubella(German measles)	10	34	183	1,627	1,476	9,757
Syphilis (Primary & Secondary): Civilian	463	521	418	16,152	14,905	11,991
Military	5	2	5	199	183	153
Tuberculosis	393	495	632	12,630	13,141	13,852
Tularemia	8	10	6	83	99	76
Typhoid fever	6	13	11	184	239	221
Typhus fever, tick-borne (RMSF)	37	75	63	371	524	416
Rabies, animal	92	122	99	3,105	3,835	2,388

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	-	Poliomyelitis: Total	2
Botulism (Upstate N.Y. 1)	38	Paralytic	2
Cholera	-	Psittacosis (NYC 1, Minn. 3)	57
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	-	Tetanus	35
Leptospirosis	29	Trichinosis	54
Plague	4	Typhus fever, flea-borne (endemic, murine)	14

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending July 3, 1982 and July 4, 1981 (26th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	99	73	395	40	446,168	486,754	386	295	21	144	8	90
NEW ENGLAND	9	3	15	5	10,978	11,929	17	20	1	17	-	1
Maine	-	-	-	-	513	590	-	3	-	-	-	-
N.H.	1	-	-	-	317	409	1	2	-	-	-	-
Vt.	-	-	-	-	222	206	-	-	-	-	-	-
Mass.	8	-	5	-	5,169	4,992	10	3	-	16	-	-
R.I.	-	-	-	-	760	622	1	4	-	-	-	-
Conn.	-	3	10	5	4,017	5,110	5	8	1	1	-	1
MID. ATLANTIC	12	1	52	10	56,665	56,276	74	101	5	20	2	4
Upstate N.Y.	1	1	19	3	9,296	9,450	12	12	-	2	-	1
N.Y. City	2	-	11	-	23,743	22,899	12	36	-	3	-	1
N.J.	4	-	10	-	10,190	10,919	19	31	5	8	2	1
Pa.	5	-	12	7	13,438	13,013	31	22	-	7	-	1
E.N. CENTRAL	10	-	80	7	61,303	74,852	69	48	3	12	3	3
Ohio	5	-	26	4	18,190	25,622	8	12	1	7	2	-
Ind.	-	-	15	2	7,709	6,663	38	6	2	3	-	-
Ill.	1	-	6	1	13,925	20,433	2	2	-	-	-	3
Mich.	4	-	31	-	15,427	15,641	18	28	-	2	1	-
Wis.	-	-	2	-	6,052	6,493	3	-	-	-	-	-
W.N. CENTRAL	4	7	24	3	21,981	23,017	91	8	1	3	-	3
Minn.	2	-	5	1	3,310	3,653	1	1	-	-	-	1
Iowa	1	1	10	1	2,340	2,509	1	-	-	-	-	-
Mo.	-	2	4	-	10,235	10,566	1	4	-	3	-	1
N. Dak.	-	-	-	-	295	319	-	-	-	-	-	-
S. Dak.	-	1	-	1	595	645	-	-	-	-	-	1
Nebr.	-	-	3	-	1,346	1,760	-	-	1	-	-	-
Kans.	1	3	2	-	3,860	3,574	88	3	-	-	-	-
S. ATLANTIC	35	15	57	6	108,065	119,563	33	61	8	22	-	5
Del.	-	-	-	-	1,845	1,819	2	1	-	-	-	-
Md.	-	-	13	-	15,308	13,279	-	6	1	2	-	2
D.C.	1	-	-	-	6,491	7,475	1	7	-	2	-	-
Va.	7	6	14	1	10,402	10,803	2	15	3	-	-	1
W. Va.	2	-	-	-	1,323	1,780	-	-	-	-	-	-
N.C.	5	-	5	1	19,152	18,422	4	5	-	4	-	-
S.C.	3	2	-	-	11,533	11,312	6	5	-	2	-	-
Ga.	1	1	-	-	9,483	24,628	2	3	-	1	-	-
Fla.	16	6	25	4	32,528	30,025	16	19	4	11	-	2
E.S. CENTRAL	5	9	21	2	39,190	40,332	19	15	-	3	-	-
Ky.	2	-	-	-	5,354	5,096	13	2	-	2	-	-
Tenn.	1	5	11	-	15,302	15,140	3	11	-	1	-	-
Ala.	2	3	7	2	11,554	12,682	2	2	-	-	-	-
Miss.	-	1	3	-	6,980	7,414	1	-	-	-	-	-
W.S. CENTRAL	13	22	44	1	64,990	64,092	62	18	1	58	1	12
Ark.	-	4	1	-	5,329	4,533	1	-	-	5	1	-
La.	1	5	6	-	12,081	10,003	16	6	1	5	-	-
Okla.	4	3	13	-	6,897	6,825	2	3	-	12	-	-
Tex.	8	10	24	1	40,683	42,731	43	9	-	36	-	12
MOUNTAIN	1	-	17	3	16,095	19,133	14	9	1	4	2	2
Mont.	-	-	-	-	664	673	1	-	-	-	1	-
Idaho	-	-	-	-	757	807	1	1	-	-	-	1
Wyo.	-	-	-	-	469	422	-	-	-	-	1	-
Colo.	-	-	7	1	4,170	5,134	-	6	-	1	-	-
N. Mex.	-	-	-	-	2,002	2,091	4	-	1	-	-	-
Ariz.	-	-	6	-	4,490	5,883	-	-	-	-	-	-
Utah	1	-	-	2	749	904	-	2	-	1	-	1
Nev.	-	-	4	-	2,794	3,219	8	2	-	2	-	-
PACIFIC	10	16	75	3	66,901	77,580	7	15	1	5	-	60
Wash.	1	-	8	-	5,528	6,346	2	-	-	4	-	6
Oreg.	1	-	1	-	3,847	4,821	4	10	1	1	-	-
Calif.	U	15	62	3	54,615	63,052	U	U	U	U	U	34
Alaska	2	1	3	-	1,691	1,899	1	3	-	-	-	1
Hawaii	6	-	1	-	1,220	1,462	-	2	-	-	-	19
Guam	U	-	-	-	47	69	U	U	U	U	U	-
P.R.	-	-	1	-	1,523	1,655	9	22	-	11	-	-
V.I.	-	-	-	-	105	85	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	36	211	U	U	U	U	U	1

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 3, 1982 and July 4, 1981 (26th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	13	421	15	895	2,270	50	1,729	52	3,794	24	19	1,627	1,476
NEW ENGLAND	2	24	-	9	72	2	92	2	150	1	-	14	106
Maine	-	-	-	-	5	1	5	-	33	-	-	-	33
N.H.	-	-	-	2	6	-	13	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	-	5	-	-	-	-
Mass.	2	19	-	2	51	-	22	2	74	-	-	3	18
R.I.	-	1	-	-	-	-	11	-	13	1	-	1	-
Conn.	-	4	-	3	8	1	35	-	13	-	-	2	12
MID. ATLANTIC	3	58	4	145	734	12	311	3	237	3	4	82	173
Upstate N.Y.	-	14	3	102	193	5	102	2	47	2	2	48	71
N.Y. City	2	20	1	35	53	1	54	-	38	-	2	20	46
N.J.	-	16	-	4	50	1	64	1	36	-	-	14	46
Pa.	1	8	-	4	438	5	91	-	116	1	-	-	10
E.N. CENTRAL	-	29	11	65	72	4	208	16	2,077	1	-	143	320
Ohio	-	7	-	1	15	2	79	11	1,531	1	-	-	1
Ind.	-	1	-	2	8	2	22	-	33	-	-	26	113
Ill.	-	3	7	23	21	-	56	1	157	-	-	55	75
Mich.	-	16	4	39	27	-	40	4	279	-	-	42	31
Wis.	-	2	-	-	1	-	11	-	77	-	-	20	100
W.N. CENTRAL	-	13	-	38	7	-	75	23	518	5	1	58	75
Minn.	-	2	-	-	3	-	19	23	396	3	1	8	7
Iowa	-	5	-	-	1	-	5	-	29	-	-	-	4
Mo.	-	3	-	2	1	-	21	-	14	1	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	3	-	1	-	-	1	-
Nebr.	-	2	-	-	1	-	9	-	-	-	-	-	1
Kans.	-	1	-	36	1	-	12	-	78	1	-	11	61
S. ATLANTIC	6	65	-	33	320	13	346	2	213	5	2	63	119
Del.	-	-	-	-	-	-	-	-	10	-	-	1	1
Md.	1	8	-	2	2	-	21	-	21	-	2	33	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	1	23	-	14	6	1	37	-	30	3	-	11	4
W. Va.	-	3	-	2	8	-	7	1	81	1	-	1	22
N.C.	-	-	-	-	3	2	69	1	10	-	-	1	4
S.C.	-	3	-	-	-	1	40	-	12	1	-	1	8
Ga.	1	10	-	-	101	5	74	-	10	-	-	5	32
Fla.	3	15	-	14	199	4	96	-	39	-	-	10	47
E.S. CENTRAL	-	5	-	7	2	4	119	2	32	2	-	37	23
Ky.	-	4	-	1	-	1	20	-	9	-	-	21	14
Tenn.	-	-	-	5	-	2	48	2	13	1	-	-	8
Ala.	-	-	-	-	2	1	44	-	5	1	-	-	1
Miss.	-	1	-	1	-	-	7	-	5	-	-	16	-
W.S. CENTRAL	1	32	-	14	738	11	210	3	140	3	1	91	118
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	2
La.	-	3	-	2	-	3	37	-	3	2	-	1	9
Okla.	-	3	-	-	5	3	20	-	-	-	-	3	-
Tex.	1	23	-	12	732	5	141	3	131	1	1	86	107
MOUNTAIN	-	10	-	5	31	1	84	-	55	4	-	53	70
Mont.	-	-	-	-	-	-	4	-	3	-	-	4	3
Idaho	-	-	-	-	1	-	6	-	3	3	-	1	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	5	1
Colo.	-	6	-	5	8	1	33	-	8	1	-	4	30
N. Mex.	-	2	-	-	8	-	12	-	-	-	-	7	5
Ariz.	-	1	-	-	4	-	14	-	24	-	-	7	18
Utah	-	1	-	-	-	-	7	-	11	-	-	16	3
Nev.	-	-	-	-	10	-	3	-	4	-	-	9	7
PACIFIC	1	185	-	579	294	3	284	1	372	-	2	1,086	472
Wash.	-	11	-	25	1	1	30	1	59	-	-	32	54
Oreg.	1	6	-	-	3	1	61	-	-	-	1	5	48
Calif.	U	166	U	550	288	U	180	U	300	U	U	1,040	362
Alaska	-	-	-	1	-	1	10	-	6	-	-	1	-
Hawaii	-	2	-	3	2	-	3	-	7	-	1	8	8
Guam	U	1	U	5	6	U	2	U	1	U	U	1	1
P.R.	-	4	4	71	212	-	5	4	43	-	-	4	3
V.I.	-	-	-	-	7	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	-	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 3, 1982 and July 4, 1981 (26th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	16,152	14,905	393	12,630	83	6	184	37	371	3,105
NEW ENGLAND	273	322	11	339	-	1	12	1	4	21
Maine	1	2	-	25	-	-	-	-	-	19
N.H.	1	12	-	10	-	-	-	1	1	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	191	216	7	226	-	1	9	-	1	-
R.I.	14	19	-	14	-	-	-	-	1	-
Conn.	65	60	4	57	-	-	1	-	1	2
MID. ATLANTIC	2,239	2,237	80	2,079	6	2	32	1	9	74
Upstate N.Y.	237	206	26	364	6	-	3	-	-	39
N.Y. City	1,346	1,353	26	774	-	1	20	1	1	-
N.J.	291	290	28	430	-	-	5	-	6	1
Pa.	365	388	-	511	-	1	4	-	2	34
E.N. CENTRAL	859	1,031	97	1,937	-	1	15	2	33	360
Ohio	145	134	21	321	-	1	7	2	32	53
Ind.	103	105	14	255	-	-	-	-	-	53
Ill.	423	571	37	764	-	-	3	-	1	178
Mich.	134	174	24	491	-	-	5	-	-	3
Wis.	54	47	1	106	-	-	-	-	-	73
W.N. CENTRAL	308	290	17	392	13	-	7	-	12	692
Minn.	56	101	4	70	-	-	4	-	-	113
Iowa	17	13	3	47	1	-	1	-	2	219
Mo.	189	151	9	179	8	-	1	-	5	66
N. Dak.	4	6	-	7	-	-	-	-	-	99
S. Dak.	-	2	-	16	-	-	-	-	-	58
Nebr.	8	3	-	15	1	-	-	-	-	81
Kans.	34	14	1	58	3	-	1	-	5	96
S. ATLANTIC	4,437	3,912	72	2,608	8	-	27	22	212	507
Del.	9	7	-	22	-	-	-	-	-	-
Md.	247	302	3	303	1	-	6	-	25	27
D.C.	261	330	1	104	-	-	-	-	-	-
Va.	321	347	-	305	1	-	2	7	27	257
W. Va.	17	9	9	78	-	-	3	-	4	27
N.C.	299	310	15	423	-	-	-	8	85	30
S.C.	230	261	-	233	5	-	3	5	52	26
Ga.	911	990	21	387	-	-	-	2	18	105
Fla.	2,142	1,356	23	753	1	-	13	-	1	35
E.S. CENTRAL	1,129	951	46	1,185	6	-	14	3	22	385
Ky.	63	48	16	308	-	-	-	-	-	80
Tenn.	300	373	14	390	4	-	2	3	14	248
Ala.	406	261	9	332	-	-	9	-	4	57
Miss.	360	269	7	155	2	-	3	-	4	-
W.S. CENTRAL	4,209	3,596	43	1,495	36	1	17	8	72	630
Ark.	106	67	8	194	21	-	1	-	11	86
La.	896	820	-	240	3	-	1	-	-	16
Okla.	84	85	4	213	12	-	2	8	39	117
Tex.	3,123	2,624	31	888	-	1	13	-	22	411
MOUNTAIN	415	372	15	365	10	-	6	-	6	112
Mont.	3	9	-	25	2	-	-	-	1	42
Idaho	19	14	-	14	1	-	-	-	1	2
Wyo.	10	7	-	2	1	-	-	-	1	10
Colo.	114	117	2	48	1	-	2	-	-	15
N. Mex.	89	72	5	71	-	-	-	-	1	10
Ariz.	95	80	2	146	-	-	3	-	-	26
Utah	13	14	4	21	5	-	1	-	-	5
Nev.	72	59	2	38	-	-	-	-	2	2
PACIFIC	2,283	2,194	12	2,230	4	1	54	-	1	324
Wash.	69	75	10	144	1	-	3	-	-	-
Oreg.	62	44	-	88	-	-	1	-	-	-
Calif.	2,079	2,031	U	1,800	3	U	48	U	1	254
Alaska	8	6	-	32	-	-	-	-	-	70
Hawaii	65	38	2	166	-	1	2	-	-	-
Guam	1	-	U	3	-	U	-	U	-	-
P.R.	318	337	5	176	-	-	2	-	-	29
V.I.	8	9	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	19	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending July 3, 1982 (26th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	627	418	146	29	17	17	44
Boston, Mass.	190	109	61	10	5	5	15
Bridgeport, Conn.	42	27	8	2	3	2	4
Cambridge, Mass.	24	21	2	1	-	-	1
Fall River, Mass.	26	20	5	-	1	-	-
Hartford, Conn.	44	28	6	5	3	2	1
Lowell, Mass.	41	30	10	1	-	-	5
Lynn, Mass.	17	14	3	-	-	-	-
New Bedford, Mass.	24	18	2	2	2	-	-
New Haven, Conn.	42	26	10	5	1	-	1
Providence, R.I.	52	30	16	2	1	3	1
Somerville, Mass.	11	9	1	1	-	-	3
Springfield, Mass.	39	26	8	-	1	4	3
Waterbury, Conn.	34	25	9	-	-	-	8
Worcester, Mass.	41	35	5	-	-	1	2
MID. ATLANTIC	2,511	1,589	573	187	82	79	89
Albany, N.Y.	54	29	14	3	4	4	1
Allentown, Pa.	18	15	3	-	-	-	-
Buffalo, N.Y.	109	65	23	6	3	12	3
Camden, N.J.	47	30	11	3	1	2	2
Elizabeth, N.J.	29	23	5	1	-	-	-
Erie, Pa.†	36	25	5	1	1	-	-
Jersey City, N.J.	46	27	12	1	1	5	-
N.Y. City, N.Y.	1,380	886	298	120	45	31	49
Newark, N.J.	61	24	22	7	4	3	7
Paterson, N.J.	26	21	2	2	1	-	-
Philadelphia, Pa.†	276	158	74	24	8	12	14
Pittsburgh, Pa.†	60	39	18	2	-	1	1
Reading, Pa.	35	28	6	1	-	-	3
Rochester, N.Y.	113	77	22	6	4	4	6
Schenectady, N.Y.	24	19	5	-	-	-	-
Scranton, Pa.†	23	16	5	1	-	1	-
Syracuse, N.Y.	78	40	26	3	6	3	-
Trenton, N.J.	26	15	8	2	1	-	-
Utica, N.Y.	41	32	5	-	3	1	2
Yonkers, N.Y.	29	20	5	4	-	-	1
E.N. CENTRAL	2,232	1,407	511	147	78	89	67
Akron, Ohio	52	37	11	1	1	2	-
Canton, Ohio	31	19	9	1	1	1	-
Chicago, Ill.	537	319	129	43	22	24	8
Cincinnati, Ohio	128	76	38	9	2	3	7
Cleveland, Ohio	187	111	41	10	6	19	3
Columbus, Ohio	94	56	22	7	5	4	2
Dayton, Ohio	89	62	20	1	3	3	-
Detroit, Mich.	276	162	73	23	7	11	7
Evansville, Ind.	41	31	6	2	1	1	2
Fort Wayne, Ind.	55	37	15	-	1	2	6
Gary, Ind.	18	9	3	2	4	-	-
Grand Rapids, Mich.	67	40	15	3	1	4	7
Indianapolis, Ind.	160	107	30	9	10	4	1
Madison, Wis.	43	29	6	4	1	3	3
Milwaukee, Wis.	136	91	31	9	3	2	1
Peoria, Ill.	45	30	5	5	4	1	2
Rockford, Ill.	47	28	13	4	1	1	5
South Bend, Ind.	42	31	10	1	-	-	3
Toledo, Ohio	108	78	15	10	3	2	4
Youngstown, Ohio	76	54	15	3	2	2	6
W.N. CENTRAL	639	441	123	35	22	17	29
Des Moines, Iowa§	53	51	-	-	1	-	-
Duluth, Minn.	24	14	3	1	3	3	1
Kansas City, Kans.	21	11	6	2	2	-	-
Kansas City, Mo.	98	60	23	7	4	4	7
Lincoln, Nebr.	28	23	3	-	-	2	2
Minneapolis, Minn.	70	45	15	7	-	3	1
Omaha, Nebr.	87	59	18	6	4	-	-
St. Louis, Mo.	130	89	26	9	6	-	10
St. Paul, Minn.	68	50	14	-	1	3	3
Wichita, Kans.	60	39	15	3	1	2	5

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,393	816	365	120	34	55	41
Atlanta, Ga.	162	89	43	21	6	3	3
Baltimore, Md.	297	172	84	23	5	13	9
Charlotte, N.C.	75	43	12	7	6	4	2
Jacksonville, Fla.	127	83	37	2	2	3	2
Miami, Fla.	120	75	24	12	2	7	7
Norfolk, Va.	56	33	20	1	1	1	1
Richmond, Va.	91	55	21	5	1	9	6
Savannah, Ga.	40	25	13	1	1	-	1
St. Petersburg, Fla.	85	69	15	1	-	-	2
Tampa, Fla.	54	30	14	6	3	1	4
Washington, D.C.	212	101	58	34	6	13	3
Wilmington, Del.	74	41	24	7	1	1	1
E.S. CENTRAL	675	417	152	37	41	28	17
Birmingham, Ala.	114	65	24	9	8	8	-
Chattanooga, Tenn.	61	43	12	2	3	1	2
Knoxville, Tenn.	63	46	11	3	3	-	-
Louisville, Ky.	99	61	26	5	3	4	7
Memphis, Tenn.	150	94	29	9	13	5	1
Mobile, Ala.	51	26	13	2	5	5	2
Montgomery, Ala.	48	31	14	2	1	-	1
Nashville, Tenn.	89	51	23	5	5	5	4
W.S. CENTRAL	980	558	255	85	54	36	26
Austin, Tex.	46	35	8	2	1	-	-
Baton Rouge, La.	37	18	9	5	3	2	4
Corpus Christi, Tex.	49	22	9	9	7	2	1
Dallas, Tex.	177	91	54	19	9	4	1
El Paso, Tex.	58	34	16	2	2	4	1
Fort Worth, Tex.	71	44	18	2	5	2	7
Houston, Tex.	70	28	23	11	5	3	1
Little Rock, Ark.	52	30	13	3	2	4	1
New Orleans, La.	121	69	32	12	5	3	-
San Antonio, Tex.	168	100	38	15	9	6	8
Shreveport, La.	60	36	16	2	3	3	1
Tulsa, Okla.	71	43	19	3	3	3	1
MOUNTAIN	570	342	132	47	31	18	26
Albuquerque, N. Mex.	85	57	17	6	4	1	4
Colo. Springs, Colo.	34	20	8	2	4	-	4
Denver, Colo.	122	66	30	11	8	7	5
Las Vegas, Nev.	67	34	19	11	1	2	1
Ogden, Utah	17	12	2	1	2	-	-
Phoenix, Ariz.	110	68	23	7	7	5	5
Pueblo, Colo.	14	8	4	1	1	-	-
Salt Lake City, Utah	55	32	11	5	4	3	3
Tucson, Ariz.	66	45	18	3	-	-	4
PACIFIC	1,611	1,028	360	118	59	46	85
Berkeley, Calif.	26	14	7	2	2	1	-
Fresno, Calif.	75	53	11	5	5	1	3
Glendale, Calif.	22	16	3	1	1	1	1
Honolulu, Hawaii	55	32	12	5	4	2	2
Long Beach, Calif.	89	58	17	8	4	2	1
Los Angeles, Calif.	411	258	103	25	15	10	12
Oakland, Calif.	86	56	16	11	3	-	6
Pasadena, Calif.	29	20	7	-	-	2	4
Portland, Oreg.	113	67	24	11	4	7	5
Sacramento, Calif.	61	37	15	6	3	-	5
San Diego, Calif.	123	81	28	9	4	1	11
San Francisco, Calif.	139	87	33	10	4	5	5
San Jose, Calif.	158	91	40	14	7	6	14
Seattle, Wash.	123	89	21	8	1	4	5
Spokane, Wash.	56	37	13	1	2	3	5
Tacoma, Wash.	45	32	10	2	-	1	6
TOTAL	11,238††	7,008	2,617	885	418	385	424

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality February 1982		Estimated number of physician contacts February 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	164,820	931.3	91,355,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	7,150	40.4	5,335,000
Malignant neoplasms (140-208)	1,804,120	35,020	197.9	1,442,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	63,320	357.8	4,697,000
Suicides, homicides (E950-E978)	1,401,880	4,040	22.8	–
Chronic liver disease and cirrhosis (571)	301,070	2,070	11.7	114,000
Cerebrovascular diseases (430-438)	280,430	13,980	79.0	495,000
Pneumonia and influenza (480-487)	124,830	4,340	24.5	1,150,000
Diabetes mellitus (250)	117,340	2,970	16.8	2,314,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	4,670	26.4	1,864,000
Prenatal care[5]				2,014,000
Infant mortality[5]		3,600	13.1/1,000 live births	

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[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the mid-point of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 3, June 21, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 2, May 12, 1982, p. 1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 3, June 21, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, February 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 31, No. 2, May 12, 1982, p. 1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Opportunistic Infections – Continued

of intravenous (IV) drug abuse; 8 denied drug abuse, and for 1, no information was available on drug use. The 10 had resided in the United States for periods ranging from 3 months to 8 years (the majority, for 2 years or less). At least 1 patient had onset of illness before arriving in the United States. Immunologic studies performed at CDC on specimens from 2 patients showed results comparable to those for the 11 patients from Miami.

Other States: Opportunistic infections or Kaposi's sarcoma were also reported for 3 other Haitians located in California, Georgia, and New Jersey. All 3 were heterosexual males who denied IV drug abuse. One patient had *P. carinii* pneumonia, another had Kaposi's sarcoma, and the third had esophageal candidiasis.

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Editorial Note: The occurrence of severe opportunistic infections among 32 Haitians recently entering the United States is a new phenomenon. The in vitro immunologic findings and the high mortality rate (nearly 50%) for these patients are similar to the pattern recently described among homosexual males and IV drug abusers (*1-4*). None of the 23 Haitian males questioned reported homosexual activity, and only 1 of 26 gave a history of IV drug abuse—substantially lower than the prevalence reported for heterosexual patients of other racial/ethnic groups who had Kaposi's sarcoma or opportunistic infections. Of the 34 patients discussed above with opportunistic infections or Kaposi's sarcoma, 30 (88%) were males. All patients were between 20 and 45 years of age. Data from medical screening of 10,780 Haitians entering the United States between March and November 1980 indicated that 73% were adult males. Only 2% of those screened were <12 years old, and over 90% were <45 years old (*5*).

The occurrence of opportunistic infections among adult Haitians with no history of underlying immunosuppressive therapy or disease has not been reported previously. However, 11 cases of disseminated Kaposi's sarcoma have been diagnosed by dermatologists in Port au Prince, Haiti, over a period of 2 1/2 years (*6*). The reason for the high prevalence of disseminated tuberculosis among the group of patients discussed above is not known; but a high prevalence of tuberculosis has been documented among recent Haitian entrants (*7*), and the disease has been reported to disseminate more frequently among persons who are immunocompromised (*8,9*).

To date, it has not been established whether the cases of toxoplasmosis represent reactivation of old lesions acquired in Haiti or whether they are progressive primary infections acquired in the United States. However, serum specimens obtained from 2 patients in Miami and tested at CDC by indirect immuno-fluorescence (IIF) were negative for IgM antibody to *Toxoplasma*. This suggests that the infections of these 2 patients were not recently acquired. Serologic tests such as the IIF may be helpful in establishing or excluding a diagnosis of toxoplasmosis for patients with CNS symptoms. Tachyzoites in tissue specimens can be visualized more effectively using Giemsa stain or a recently developed immuno-peroxidase method (*10*) than with the standard hemotoxylin and eosin staining.

plasmosis for patients seen with CNS symptoms. Tachyzoites in tissue specimens can be visualized more effectively using Giémsa stain or a recently developed immuno-peroxidase method (*10*) than with the standard hemotoxylin and eosin staining.

It is not clear whether this outbreak is related to similar outbreaks among homosexual males, IV drug abusers, and others, but the clinical and immunologic pictures appear quite similar. CDC is currently collaborating with local investigators to define this problem and identify risk factors.

Physicians who care for Haitian patients should be aware that opportunistic infections may occur in this population. Health-care providers who diagnose opportunistic infections or Kaposi's sarcoma among persons who do not have underlying disease and are not on immunosuppressive therapy are requested to report such cases to CDC through their appropriate state and local health departments.

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Influenza Activity, April-May, United States, 1982

Several states reported influenza activity in April and May 1982, including the first laboratory isolations of influenza virus for the season in Idaho, Ohio, and West Virginia. In Idaho, influenza B virus was isolated from several patients in a nursing home during an outbreak of influenza that affected more than half the residents and continued from mid-April to early May, and in Ohio and West Virginia influenza B viruses were isolated from patients with sporadic cases who became ill in April and May, respectively.

Outbreaks of influenza occurred in institutions in California, Montana, New York, and South Dakota in April or May. However, little other coincident influenza activity was noted in the surrounding communities when these focal outbreaks occurred. At a Job Corps Center in Upstate New York, almost 200 of the 380 residents had influenza-like illness during an out-

Influenza Activity – Continued

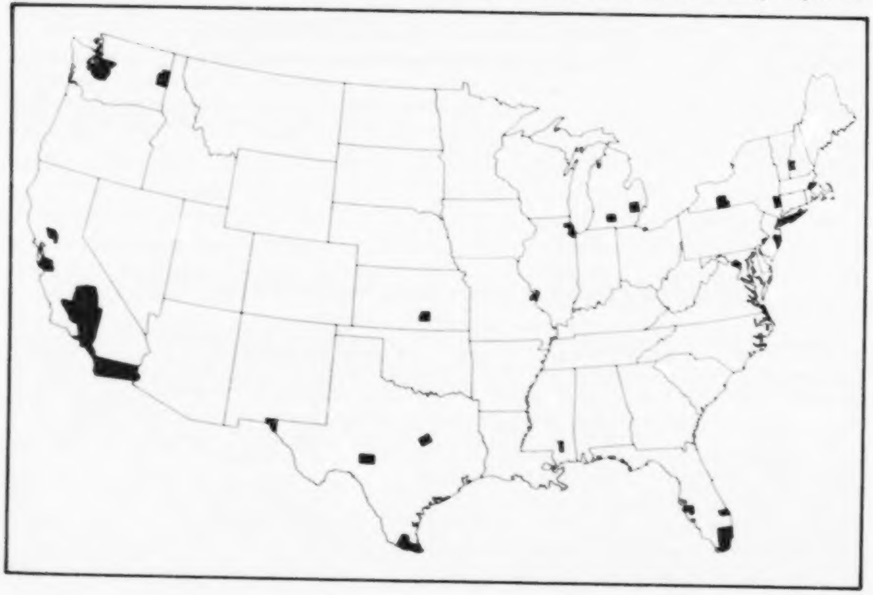
break that began in mid-April. Influenza type A(H1N1) virus was isolated from 4 of 10 patients tested. In South Dakota, approximately half of the 80 residents of a nursing home had influenza-like illness early in April. Serologic testing following the outbreak suggested that these persons had recently had influenza B infection. In April, influenza B was also serologically diagnosed as being associated with an outbreak of illness in a nursing home in Montana. In California, an outbreak of influenza began in early May and affected about half of the patients and staff members in 2 of 5 wards in a state hospital. Influenza B viruses were isolated from patients in both wards.

Reported by R Moulton, F R Dixon, MD, State Epidemiologist, Idaho Div of Health; J Porterfield-Baxa, T Halpin, MD, State Epidemiologist, Ohio Dept of Health; R Belshe, MD, Marshall University, Huntington, L Haddy, State Epidemiologist, West Virginia State Dept of Health; R Deibel, PhD, R Rothenberg, MD, State Epidemiologist, New York Dept of Health; R Melton, PhD, K Sanger, State Epidemiologist, South Dakota Dept of Health; J Brinker, J Anderson, MD, State Epidemiologist, Montana Dept of Health and Environmental Svcs; DM O'Connor, MD, Napa State Hospital, J Schieble, PhD, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; Influenza Br, Center for Infectious Diseases, CDC.

Measles, United States — Weeks 17-20, 1982

In the 4-week period April 25-May 22, 1982 (reporting weeks 17-20), 190 cases of measles were reported to CDC—an average of fewer than 48 cases per week. This total is 69.3% below the 619 cases reported in the same period in 1981. Only 33 (1.0%) of the nation's 3,144 counties reported measles to CDC in this period (Figure 1).

FIGURE 1. States and counties reporting measles, weeks 17-20, April 25-May 22, 1982



Measles – Continued

Of the 190 measles cases, 8 were known to be imported (from 6 countries—England, Finland, India, the Philippines, Russia, and Switzerland). Two of these 8 led to at least 18 subsequent cases (Kansas and New Jersey) and 42 subsequent cases (Dutchess County, New York), i.e., a total of 60 cases that could be linked to 2 of the known importations. Thus, a total of 68 (35.8%) measles cases reported were related to importations.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

The Morbidity and Mortality Weekly Report, circulation 108,000, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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Epidemiologic Notes and Reports

Pneumocystis carinii Pneumonia among Persons with Hemophilia A

CDC recently received reports of three cases of *Pneumocystis carinii* pneumonia among patients with hemophilia A and without other underlying disease. Two have died; one remains critically ill. All three were heterosexual males; none had a history of intravenous (IV) drug abuse. All had lymphopenia, and the two patients who were specifically tested have had *in vitro* laboratory evidence of cellular immune deficiency. The case reports follow.

Patient 1: A 62-year-old resident of Westchester County, New York, with a history of chronic hepatitis had received frequent injections of Factor VIII concentrate for severe hemophilia for many years. In February 1981, he began to experience weight loss and vague right upper quadrant abdominal discomfort associated with laboratory evidence of increasing hepatic dysfunction. In December 1981, while hospitalized in Miami, Florida, for elective knee surgery, he complained of cough and fever. He was lymphopenic, and chest X-ray revealed interstitial infiltrates compatible with viral pneumonia. He was discharged in late December after a brief course of corticosteroids associated with overall clinical improvement. He returned in severe respiratory distress a few days later. Open lung biopsy on January 5 revealed *P. carinii*, for which he received sulfamethoxazole/trimethoprim (SMZ/TMP) during the 2 weeks before death. *P. carinii* pneumonia and micronodular cirrhosis were documented at post-mortem examination.

Patient 2: A 59-year-old lifelong resident of Denver, Colorado, noted the onset of gradual weight loss, dysphagia associated with pharyngitis, aphthous-like ulcers, and anterior cervical adenopathy beginning in October 1980. As a patient with severe hemophilia, he had received frequent injections of Factor VIII concentrate for several years. Weight loss continued over a period of months. Oropharyngeal candidiasis was diagnosed in February 1982. He was hospitalized in May 1982 with symptoms including nausea, vomiting, and recurrent fever. Pneumonia was diagnosed, and *P. carinii* and cytomegalovirus (CMV) were repeatedly identified from lung tissue or bronchial secretions using histopathologic and culture techniques. Therapy with SMZ/TMP and pentamidine isethionate continued until death on July 5, 1982. Laboratory evidence for cellular immune dysfunction included absent mitogen responses and depletion of the T-helper lymphocyte cell population, relative increase in T-suppressor cells, and resultant inverted T-helper/T-suppressor ratio.

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HE 20.7009:

Pneumocystis Carinii pneumonia – Continued

Patient 3: A previously healthy 27-year-old lifelong resident of northeastern Ohio developed fever, urinary frequency and urgency, and extreme lassitude in July 1981. He had frequently received parenteral Factor VIII concentrate for severe hemophilia. Bilateral pneumonia was diagnosed in October 1981, and open lung biopsy revealed *P. carinii.* He responded successfully to a 3-week course of SMZ/TMP. In February 1982, he received ketoconazole to suppress repeated episodes of oral candidiasis. He was hospitalized again in April with fever, splenomegaly, anemia, and lymphopenia. An extensive tumor work-up (including laparotomy) did not uncover an underlying malignancy. Cultures of bone marrow, liver, mesenteric lymph nodes, and blood grew *Mycobacterium avium. In vitro* immunological testing in March indicated a reduction in absolute number of circulating T-cells. Subsequent, more extensive testing documented the lack of lymphocyte responsiveness to mitogens, absolute and relative decrease in T-helper cells, relative increase in T-suppressor cells, and resultant inverted T-helper/T-suppressor ratio.

For each patient, records of the administration of Factor VIII concentrate were reviewed to determine manufacturer and lot numbers. No two of the patients are known to have received concentrate from the same lots.

Reported by: NJ Ehrenkranz, MD, South Florida Hospital Consortium for Infection Control, J Rubini, MD, Cedars of Lebanon Hospital, Miami, R Gunn, MD, State Epidemiologist, Florida Dept of Health and Rehabilitative Svcs; CR Horsburgh, MD, T Collins, MD, U Hasiba, MD, W Hathaway, MD, University of Colorado School of Medicine, W Doig, MD, R Hopkins, MD, State Epidemiologist, Colorado Dept of Health; J Elliott, MD, W Hoppes, MD, I Patel, MD, Aultman Hospital, Canton, CE Krill, MD, Children's Hospital, Akron, T Halpin, MD, State Epidemiologist, Ohio Dept of Health; Field Services Div, Epidemiology Program Office, Div of Host Factors, Center for Infectious Diseases, Task Force on Kaposi's Sarcoma and Opportunistic Infections, CDC.

Editorial Note: *Pneumocystis carinii* pneumonia has not been previously reported among hemophilia patients who have had no other underlying diseases and have not had therapy commonly associated with immunosuppression. A review of the Parasitic Disease Drug Service's records of requests for pentamidine isethionate for 1980-1982 failed to identify hemophilia among the underlying disorders of patients for whom pentamidine was requested for *Pneumocystis carinii* therapy.

The clinical and immunologic features these three patients share are strikingly similar to those recently observed among certain individuals from the following groups: homosexual males, heterosexuals who abuse IV drugs, and Haitians who recently entered the United States.(*1-3*) Although the cause of the severe immune dysfunction is unknown, the occurrence among the three hemophiliac cases suggests the possible transmission of an agent through blood products.

Hemophilia A is a sex-linked, inherited disorder characterized by a deficiency in Factor VIII activity. There are an estimated 20,000 patients with hemophilia A in the United States (*4*). Severity of disease is classified according to percentage of endogenous Factor VIII activity. Approximately 60% of the 20,000 are classified as severe, and 40% are classified as moderate (*4*). Factor VIII deficiency can be treated with intravenous administration of exogenous Factor VIII as either cryoprecipitate made from individual units of fresh frozen plasma or lyophilized Factor VIII concentrate manufactured from plasma pools collected from as many as a thousand or more donors.

CDC has notified directors of hemophilia centers about these cases and, with the National Hemophilia Foundation, has initiated collaborative surveillance. A Public Health Service advisory committee is being formed to consider the implication of these findings. Physicians diagnosing opportunistic infections in hemophilia patients who have not received antecedent

Pneumocystis Carinii pneumonia – Continued

immunosuppressive therapy are encouraged to report them to the CDC through local and state health departments.

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Current Trends

Lyme Disease

Lyme disease is an illness recently described in the United States and is named after Lyme, Connecticut, where it was first studied in 1975. The disease has subsequently been recognized in at least 14 additional states. Cases have been reported primarily from three geographic areas: the East (Connecticut, Delaware, Georgia, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island), the Midwest (Minnesota, Wisconsin), and the West (California, Nevada, Oregon); a case has also been reported in Arkansas. As awareness of the disease increases, it is likely that additional states will be added to this list.

Lyme disease is a systemic illness characterized by a distinctive primary skin lesion (erythema chronicum migrans [ECM]) and, in many cases, subsequent development of significant cardiac, neurologic, and/or arthritic complications. Nonspecific systemic symptoms such as fever, chills, malaise, arthralgia and headache are also usually present.

ECM, the most characteristic feature of the disease, begins as a red macule or papule that expands in a circular manner over a number of days. As the lesion expands, central clearing often occurs. Lesions can reach diameters of 12 inches or more, and many people will have multiple skin lesions, generally beginning several days after an initial lesion. With time, the skin lesions fade, lasting a median of 3 weeks.

Days to weeks after the skin lesion appears, cardiac, neurologic, or joint manifestations may develop. Not all persons with ECM, however, will develop these complications. The usual cardiac manifestations are atrioventricular conduction defects, although electrocardiographic changes consistent with myocarditis or pericarditis may occur. The most common neurologic manifestations are headache and stiff neck, consistent with meningoencephalitis. Cranial nerve palsies, as well as motor and sensory radiculitis, may also be seen. Both cardiac and neurologic abnormalities tend to be self-limited, although repeated episodes may occur.

The arthritic manifestations, which begin weeks to as long as two years (median, four weeks) after the appearance of ECM, are characterized by intermittent attacks of acute arthritis, usually of the large joints, with each episode lasting days to several months. About 10% of people with Lyme disease, primarily those with preceding attacks of acute arthritis, subsequently develop chronic arthritis, usually in the knee.

Lyme disease is thought to be caused by an infectious agent transmitted by *Ixodes* ticks, although other vectors could be involved. In Connecticut, about 20% of patients remember a tick bite 3-30 days before the appearance of ECM at the site; in those cases in which the tick was examined, it was identified as *I. dammini*. In California and Oregon, *I. pacificus* ticks have been implicated. As further evidence for an infectious etiology, antimicrobial therapy has been shown to significantly alter the course of the disease. Penicillin V or tetracycline, 250 mg, orally, four times a day for 10 days, can successfully treat the early phases of the disease when ECM is present and can prevent, or at least ameliorate, the subsequent, more severe cardiac, neurologic, or arthritic phases.

Work is underway to identify an agent of the disease and to develop a diagnostic laboratory test. Recently, a spirochete was isolated from *I. dammini* ticks; indirect fluorescent antibody testing of patient sera suggests that this may be the etiologic agent of Lyme disease. At present, however, the diagnosis of Lyme disease rests on clinical grounds, based principally on recognition of typical ECM skin lesions in association with cardiac, neurologic, and arthritic abnormalities.

The majority of Lyme disease patients become ill in the summer months. Because the full geographical distribution and the number of cases are not known, State and Territorial Epidemiologists and CDC are attempting to identify all cases of Lyme disease that occur in the United States this year. Health care providers are encouraged to report cases to appropriate local and state health departments.

Reported by AC Steere, MD, Yale University School of Medicine, New Haven, Connecticut; Special Pathogens Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

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Surveillance of Childhood Lead Poisoning — United States, First Quarter Fiscal Year 1982

For the first quarter of fiscal year 1982, 51 lead-poisoning control programs reported screening 92,769 children and identifying 3,061 with lead toxicity (Table 1). The reported number of children screened is 35% lower than the 143,000 tested for lead toxicity the previous quarter and is the smallest number reported screened in any quarter since early 1978.

Screening for lead toxicity is somewhat seasonal. More children are tested from April through September than from October through March—with the fourth quarter of the fiscal year (i.e., June 1-September 30) usually being the peak period. However, the 35% decline between the last quarter of fiscal year 1981 and the first quarter of fiscal year 1982 greatly exceeds the 4%-10% reduction for these periods usually seen in previous years.

The decline in the number of children reported screened in the first quarter of fiscal year 1982, as compared with the immediately preceding quarter, can be accounted for in two ways: 1) Eight fewer communities reported than in the previous quarter (several cities, such as Chicago, Detroit, St. Louis, and Newark, that traditionally have reported a substantial level of activity did not report); and 2) two-thirds of the communities that did report showed de-

Childhood Lead Poisoning – Continued

creases in numbers screened; 19 of these programs recorded declines of 20% or more—with Philadelphia having the most marked reduction—75%.

Reported by Environmental Health Svcs Div, Center for Environmental Health, CDC.

TABLE 1. Results of screening in childhood lead poisoning prevention programs, United States, first quarter fiscal year 1982 (October 1-December 31, 1981)

Programs	Number of children						Number of dwellings related to children with lead toxicity		
		With lead toxicity*							
		Requiring pediatric management							
	Screened	Total	Class II	Classes III & IV	Receiving pediatric management	Identified with iron deficiency	Inspected	Found with lead	Reduced
Bridgeport, Conn	758	33	27	6	183	31	33	29	21
Waterbury, Conn	799	10	9	1	104	92	21	15	19
Boston, Mass	5,505	184	126	58	653	208	76	75	48
Lawrence, Mass	1,180	98	71	27	221	18	57	52	44
Worcester, Mass	1,308	23	16	7	98	4	31	31	24
Rhode Island	1,416	41	22	19	432	28	74	35	30
REGION I TOTAL	**10,966**	**389**	**271**	**118**	**1,691**	**381**	**292**	**237**	**186**
Atlantic City, N.J	246	16	10	6	27	0	5	5	11
Camden, N.J	886	35	27	8	218	29	34	18	17
East Orange, N.J	750	40	35	5	174	61	13	9	10
Elizabeth, N.J	654	36	30	6	120	49	11	10	13
Jersey City, N.J	733	76	21	55	154	50	52	45	45
Long Branch, N.J	172	0	0	0	26	3	10	7	7
Paterson, N.J	942	43	17	26	621	122	33	30	49
Plainfield, N.J	843	28	22	6	112	31	23	19	3
New York City	29,150	1,081	756	325	2,338	2,325	526	337	182
Monroe Co., N.Y	1,240	94	72	22	206	35	27	20	22
Westchester Co., N.Y	1,312	29	18	11	255	75	42	28	36
REGION II TOTAL	**35,928**	**1,478**	**1,008**	**470**	**4,251**	**2,780**	**776**	**528**	**395**
Delaware State	1,125	26	18	8	197	32	20	12	9
Washington, D.C	2,618	51	33	18	244	307	93	72	46
Baltimore, Md	5,165	151	110	41	670	120	226	107	77
Chester, Pa	471	12	8	4	101	13	15	12	12
Philadelphia, Pa	1,287	82	55	27	1,826	4	61	59	33
Wilkes-Barre, Pa	399	12	8	4	74	24	11	10	4
York, Pa	139	0	0	0	2	11	0	0	0
Lynchburg, Va	410	5	2	3	55	6	11	8	6
Newport News, Va	712	3	2	1	57	79	7	7	3
Norfolk, Va	972	8	6	2	170	21	17	15	6
Portsmouth, Va	598	12	9	3	99	13	21	12	5
Richmond, Va	751	11	10	1	85	8	5	5	5
REGION III TOTAL	**14,647**	**373**	**261**	**112**	**3,580**	**638**	**487**	**319**	**206**
Savannah-Chatham Co., Ga	1,219	28	15	13	239	16	117	110	60
Louisville, Ky	2,640	44	33	11	286	75	82	64	97
Cabarrus Co., N.C	369	0	0	0	11	6	6	2	1
South Carolina State	7,843	66	52	14	419	0	79	53	58
REGION IV TOTAL	**12,071**	**138**	**100**	**38**	**955**	**97**	**284**	**229**	**216**
Kankakee, Ill	408	23	17	6	75	65	46	44	18
Madison Co., Ill	1,551	30	27	3	123	4	23	18	2
Rockford, Ill	786	1	0	1	68	7	2	2	16
Waukegan-Lake Co., Ill †	547	3	2	1	64	13	4	1	1
Ill. (other local progs.)†	1,265	14	11	3	31	1	15	10	2
Grand Rapids, Mich †	665	11	9	2	NA	28	9	8	4
Wayne Co., Mich	426	20	8	12	79	18	15	11	10
Akron, Ohio	580	14	13	1	106	30	20	15	22
Cleveland, Ohio	3,410	321	254	67	885	355	70	26	27
Beloit, Wis	225	10	8	2	17	9	7	7	0
Milwaukee, Wis	1,189	69	43	26	308	74	110	80	126
REGION V TOTAL	**11,052**	**516**	**392**	**124**	**1,756**	**604**	**321**	**222**	**228**
Arkansas State	1,986	49	29	20	213	61	49	29	33
New Orleans, La	2,613	70	57	13	573	138	93	52	79
Houston, Tex	1,433	14	7	7	126	27	19	8	3
REGION VI TOTAL	**6,032**	**133**	**93**	**40**	**912**	**226**	**161**	**89**	**115**
Cedar Rapids-Linn Co., Iowa	631	7	4	3	47	12	7	7	11
Davenport-Scott Co., Iowa†	896	10	6	4	61	6	15	8	4
Springfield, Mo.†	288	9	8	1	9	284	13	8	2
Omaha-Douglas Co., Neb	258	8	6	2	139	7	30	24	38
REGION VII TOTAL	**2,073**	**34**	**24**	**10**	**256**	**309**	**65**	**47**	**55**
U.S. TOTAL	**92,769**	**3,061**	**2,149**	**912**	**13,401**	**5,035**	**2,386**	**1,671**	**1,401**

*Screening Class II and Classes III & IV defined in CDC Statement "Preventing Lead Poisoning in Young Children," April 1978.

†Reporting program not receiving lead poisoning grant support.

NA — Not available

Epidemiologic Notes and Reports

Follow-Up of Gynecomastia among Haitian Males

The following account updates the recent report of gynecomastia among Haitian male entrants located at the Immigration and Naturalization Service's (INS) Service Processing Centers (*1*). Current findings continue to indicate a correlation between the date of entrant arrival and spontaneous resolution of gynecomastia. The prevalence of gynecomastia at the INS Fort Allen Service Processing Center, Puerto Rico, has decreased from 77 (14.3%) of 540 examined in December, 1981, to 47/508 (9.3%) in May 1982.

On May 11, 1982, 66 of the 77 Haitian males with gynecomastia detected at Fort Allen in early December 1981 were re-examined; 46 patients (69.7%) no longer had evidence of gynecomastia, and six had decreased breast size. Therefore, of the originally detected cases, 52/66 (78.8%) have either totally or partially remitted. Most of these cases occurred among Haitians who had arrived in the United States by late August 1981. In addition, 10 of 12 Haitian males with gynecomastia detected at Fort Allen after their transfer from the El Paso, Texas, and Otisville, New York, Service Processing Centers between late December and early March were examined on May 11; nine (90%) no longer had evidence of gynecomastia.

(Continued on page 375)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		27th WEEK ENDING			CUMULATIVE, FIRST 27 WEEKS		
		July 10, 1982	July 11, 1981	MEDIAN 1977-1981	July 10, 1982	July 11, 1981	MEDIAN 1977-1981
Aseptic meningitis		182	207	121	2,339	2,295	1,673
Brucellosis		6	2	3	80	80	88
Encephalitis:	Primary (arthropod-borne & unspec.)	25	25	14	413	410	340
	Post infectious	1	5	5	41	60	109
Gonorrhea:	Civilian	14,205	17,629	18,105	462,544	504,383	490,017
	Military	586	282	656	13,427	14,901	14,076
Hepatitis:	Type A	410	380	460	11,306	13,178	14,853
	Type B	370	359	311	10,572	10,359	8,489
	Non A, Non B	45	N	N	1,102	N	N
	Unspecified	149	142	165	4,660	5,634	5,159
Legionellosis		6	N	N	196	N	N
Leprosy		5	13	7	98	122	90
Malaria		33	39	25	466	715	320
Measles (rubeola)		38	46	284	973	2,316	11,934
Meningococcal infections:	Total	46	43	33	1,783	2,189	1,638
	Civilian	44	43	33	1,773	2,181	1,621
	Military	2	-	-	10	8	11
Mumps		37	51	128	3,846	2,839	10,113
Pertussis		18	18	35	544	530	602
Rubella (German measles)		51	34	192	1,753	1,510	9,983
Syphilis (Primary & Secondary):	Civilian	494	471	380	16,775	15,376	12,308
	Military	2	10	6	201	193	159
Tuberculosis		467	409	467	13,177	13,550	14,286
Tularemia		7	2	4	89	101	82
Typhoid fever		14	14	11	199	253	232
Typhus fever, tick-borne (RMSF)		64	52	48	434	576	443
Rabies, animal		108	163	89	3,229	3,998	2,477

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Ohio 1, Wash. 1, Calif. 3)	45	Paralytic (Indiana 1)	3
Cholera	-	Psittacosis (Vt. 1, Calif. 3)	61
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	-	Tetanus (Minn. 1, Ore. 1, Calif. 1)	38
Leptospirosis (Hawaii 1)	30	Trichinosis	54
Plague (Wyo. 1)	5	Typhus fever, flea-borne (endemic, murine) (Tex. 1, Miss. 1)	16

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending July 10, 1982 and July 11, 1981 (27th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	182	80	413	41	462,544	504,383	410	370	45	149	6	98
NEW ENGLAND	11	3	16	5	11,435	12,324	8	17	4	11	1	1
Maine	2	-	-	-	538	613	-	1	-	-	-	-
N.H.	2	-	-	-	327	427	-	-	1	-	-	-
Vt.	-	-	-	-	228	211	4	1	1	-	-	-
Mass.	4	-	6	-	5,294	5,208	2	8	1	11	-	-
R.I.	3	-	-	-	789	630	1	3	-	-	-	-
Conn.	-	3	10	5	4,259	5,235	1	4	1	-	1	1
MID. ATLANTIC	12	2	53	11	59,013	58,813	74	70	1	20	1	4
Upstate N.Y.	2	2	19	3	9,580	9,760	5	7	-	-	-	1
N.Y. City	2	-	11	-	24,628	24,088	8	16	-	2	-	1
N.J.	7	-	10	-	10,758	11,260	21	34	1	11	-	1
Pa.	1	-	13	8	14,047	13,705	40	13	-	7	1	1
E.N. CENTRAL	14	-	87	7	62,947	77,535	31	28	2	5	2	3
Ohio	10	-	28	4	18,583	26,565	8	9	1	-	-	-
Ind.	-	-	18	2	7,844	6,917	11	3	1	3	-	-
Ill.	-	-	6	1	14,325	21,241	-	3	-	-	-	3
Mich.	4	-	33	-	15,935	16,035	10	13	-	2	2	-
Wis.	-	-	2	-	6,260	6,777	2	-	-	-	-	-
W.N. CENTRAL	7	9	26	3	22,669	23,849	10	14	3	1	1	3
Minn.	-	-	6	1	3,437	3,733	6	4	1	-	-	1
Iowa	1	1	11	1	2,395	2,612	-	4	1	-	-	-
Mo.	-	3	4	-	10,526	11,002	3	5	-	-	1	1
N. Dak.	-	-	-	-	308	331	-	-	-	-	-	-
S. Dak.	-	1	-	1	616	682	-	-	-	-	-	1
Nebr.	4	1	3	-	1,396	1,813	-	1	1	1	-	-
Kans.	2	3	2	-	3,991	3,676	1	-	-	-	-	-
S. ATLANTIC	43	16	61	6	111,129	124,040	69	75	3	22	-	5
Del.	-	-	-	-	1,899	1,891	1	3	-	-	-	-
Md.	6	-	13	-	15,670	13,847	2	13	-	2	-	2
D.C.	-	-	-	-	6,733	7,702	-	-	-	-	-	-
Va.	4	6	16	1	10,617	11,194	7	9	-	3	-	1
W. Va.	-	-	1	-	1,385	1,890	4	3	-	1	-	-
N.C.	10	-	6	1	20,029	19,316	3	3	-	6	-	-
S.C.	2	2	-	-	12,092	11,929	8	4	-	1	-	-
Ga.	-	1	-	-	9,483	25,509	12	18	2	1	-	-
Fla.	21	7	25	4	33,223	30,762	32	22	1	8	-	2
E.S. CENTRAL	5	10	23	2	40,761	42,056	7	29	1	-	-	-
Ky.	1	-	-	-	5,516	5,327	-	2	-	-	-	-
Tenn.	2	6	12	-	15,937	15,855	4	15	-	-	-	-
Ala.	2	3	8	2	12,116	12,928	2	11	1	-	-	-
Miss.	-	1	3	-	7,192	7,946	1	1	-	-	-	-
W.S. CENTRAL	41	23	47	1	66,500	66,082	91	37	3	45	-	15
Ark.	-	4	1	-	5,521	4,773	1	1	-	5	-	-
La.	5	6	6	-	12,125	10,059	7	2	-	8	-	-
Okla.	6	3	14	-	7,336	7,105	12	6	3	3	-	-
Tex.	30	10	26	1	41,518	44,146	71	28	-	29	-	15
MOUNTAIN	4	-	18	3	16,697	19,659	30	16	-	5	1	2
Mont.	-	-	-	-	690	693	1	-	-	-	-	-
Idaho	-	-	-	-	774	839	5	-	-	-	1	1
Wyo.	1	-	-	-	494	465	1	-	-	1	-	-
Colo.	1	-	8	1	4,415	5,308	2	7	-	1	-	-
N. Mex.	-	-	-	-	2,058	2,160	-	-	-	-	-	-
Ariz.	1	-	6	-	4,614	6,012	17	7	-	3	-	-
Utah	-	-	-	2	766	929	2	1	-	-	-	1
Nev.	1	-	4	-	2,886	3,253	2	1	-	-	-	-
PACIFIC	45	17	82	3	71,393	80,025	90	84	28	40	-	65
Wash.	2	-	9	-	5,731	6,544	-	3	4	2	-	6
Oreg.	-	-	1	-	3,983	4,915	1	3	1	3	-	-
Calif.	38	16	68	3	58,651	65,056	88	77	23	35	-	39
Alaska	-	1	3	-	1,776	1,978	-	-	-	-	-	1
Hawaii	5	-	1	-	1,252	1,532	1	1	-	-	-	19
Guam	U	-	-	-	53	70	U	U	U	U	U	-
P.R.	-	-	1	-	1,579	1,701	7	1	-	2	-	-
V.I.	-	-	-	-	117	90	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	107	224	U	U	U	U	U	10

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 10, 1982 and July 11, 1981 (27th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	33	468	38	973	2,316	46	1,783	37	3,846	18	51	1,753	1,510
NEW ENGLAND	-	24	-	9	72	3	95	3	153	-	-	14	106
Maine	-	-	-	-	5	-	5	-	33	-	-	-	33
N.H.	-	-	-	2	6	-	13	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	-	5	-	-	-	-
Mass.	-	19	-	2	51	1	23	2	76	-	-	3	18
R.I.	-	1	-	-	-	-	11	1	14	-	-	1	-
Conn.	-	4	-	3	8	2	37	-	13	-	-	2	12
MID. ATLANTIC	6	64	10	153	755	8	319	3	240	6	3	85	181
Upstate N.Y.	-	14	4	104	194	2	104	1	48	1	-	40	76
N.Y. City	1	21	6	41	57	3	57	-	38	1	3	31	47
N.J.	4	20	-	4	50	-	64	-	36	4	-	14	48
Pa.	1	9	-	4	454	3	94	2	118	-	-	-	10
E.N. CENTRAL	3	32	-	65	73	5	213	9	2,089	1	1	145	326
Ohio	2	9	-	1	15	3	82	5	1,536	1	-	-	1
Ind.	-	1	-	2	8	-	22	-	33	-	-	26	113
Ill.	-	3	-	23	21	-	56	2	159	-	-	55	78
Mich.	1	17	-	39	28	1	41	1	280	-	-	42	33
Wis.	-	2	-	-	1	1	12	1	81	-	1	22	101
W.N. CENTRAL	1	16	1	39	7	1	76	7	524	-	1	59	75
Minn.	-	2	-	-	3	-	19	6	401	-	1	9	7
Iowa	-	5	-	-	1	-	5	-	29	-	-	-	4
Mo.	-	3	-	2	1	1	22	1	15	-	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	3	-	1	-	-	1	-
Nebr.	1	5	-	-	1	-	9	-	-	-	-	-	1
Kans.	-	1	1	37	1	-	12	-	78	-	-	11	61
S. ATLANTIC	5	69	-	33	325	9	355	2	217	3	1	64	120
Del.	-	-	-	-	-	-	-	-	10	-	-	1	1
Md.	1	9	-	2	2	-	21	-	21	-	-	33	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	-	22	-	14	6	1	38	-	30	-	1	12	4
W. Va.	2	5	-	2	8	-	7	-	81	-	-	1	22
N.C.	1	1	-	-	3	4	73	-	10	-	-	1	4
S.C.	-	3	-	-	-	-	40	1	13	3	-	1	8
Ga.	-	10	-	-	104	3	77	-	10	-	-	5	33
Fla.	1	16	-	14	201	1	97	1	42	-	-	10	47
E.S. CENTRAL	-	5	1	8	2	2	121	-	32	3	2	39	23
Ky.	-	4	-	1	-	-	20	-	9	2	1	22	14
Tenn.	-	-	1	6	-	2	50	-	13	1	1	1	8
Ala.	-	-	-	-	2	-	44	-	5	-	-	-	1
Miss.	-	1	-	1	-	-	7	-	5	-	-	16	-
W.S. CENTRAL	1	33	-	14	753	3	213	3	143	2	3	94	123
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	2
La.	-	3	-	2	-	-	37	-	3	1	-	1	9
Okla.	1	4	-	-	5	-	20	-	-	-	-	3	-
Tex.	-	23	-	12	747	3	144	3	134	1	3	89	112
MOUNTAIN	5	15	-	5	31	-	83	3	58	1	-	53	73
Mont.	-	-	-	-	-	-	4	-	3	-	-	4	3
Idaho	1	1	-	-	1	-	6	-	3	-	-	1	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	5	1
Colo.	2	8	-	5	8	-	33	-	8	1	-	4	30
N. Mex.	-	2	-	-	8	-	12	-	-	-	-	7	5
Ariz.	2	3	-	-	4	-	13	3	27	-	-	7	18
Utah	-	1	-	-	-	-	7	-	11	-	-	16	4
Nev.	-	-	-	-	10	-	3	-	4	-	-	9	9
PACIFIC	12	210	26	647	298	15	308	7	390	2	40	1,200	483
Wash.	-	11	6	31	1	1	31	1	60	1	-	32	55
Oreg.	2	8	-	-	3	2	63	-	-	-	-	5	48
Calif.	10	189	20	612	292	12	201	6	317	1	40	1,154	369
Alaska	-	-	-	1	-	-	10	-	6	-	-	1	-
Hawaii	-	2	-	3	2	-	3	-	7	-	-	8	11
Guam	U	1	U	9	6	U	2	U	3	U	U	2	1
P.R.	-	4	5	76	233	2	7	-	43	1	2	6	3
V.I.	-	-	-	-	11	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	1	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 10, 1982 and July 11, 1981 (27th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	16,775	15,376	467	13,177	89	14	199	64	434	3,229
NEW ENGLAND	275	330	16	355	2	2	14	1	5	21
Maine	1	2	2	27	-	-	-	-	-	19
N.H.	1	12	1	11	-	-	-	-	1	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	193	219	8	234	2	1	10	1	2	-
R.I.	13	19	2	16	-	-	-	-	1	-
Conn.	66	65	3	60	-	1	2	-	1	2
MID. ATLANTIC	2,293	2,341	114	2,193	7	-	32	3	12	83
Upstate N.Y.	239	210	8	372	7	-	3	-	-	44
N.Y. City	1,383	1,413	25	799	-	-	20	-	1	-
N.J.	297	313	19	449	-	-	5	3	9	1
Pa.	374	397	62	573	-	-	4	-	2	38
E.N. CENTRAL	888	1,054	68	2,004	-	-	15	8	41	372
Ohio	150	136	10	331	-	-	7	8	40	53
Ind.	104	109	13	268	-	-	-	-	-	57
Ill.	423	587	28	792	-	-	3	-	1	186
Mich.	154	174	16	506	-	-	5	-	-	3
Wis.	57	49	1	107	-	-	-	-	-	73
W.N. CENTRAL	316	302	5	397	12	-	7	-	12	711
Minn.	59	106	-	70	-	-	4	-	-	116
Iowa	17	13	-	47	1	-	1	-	2	222
Mo.	193	158	4	183	8	-	1	-	5	67
N. Dak.	4	6	-	7	-	-	-	-	-	82
S. Dak.	-	2	-	16	-	-	-	-	-	61
Nebr.	8	3	-	15	1	-	-	-	-	66
Kans.	35	14	1	59	2	-	1	-	5	97
S. ATLANTIC	4,565	4,048	97	2,704	8	2	29	35	246	533
Del.	5	7	2	24	-	-	-	-	-	-
Md.	253	311	12	315	1	1	7	2	27	27
D.C.	263	340	-	104	-	-	-	-	-	-
Va.	337	363	-	305	1	-	2	3	29	272
W. Va.	17	10	2	80	-	-	3	-	4	30
N.C.	305	319	9	431	-	-	-	19	104	32
S.C.	239	271	21	256	5	-	3	6	58	27
Ga.	937	1,030	10	397	-	-	-	5	23	110
Fla.	2,206	1,397	39	792	1	1	14	-	1	35
E.S. CENTRAL	1,171	983	30	1,215	6	-	14	4	26	393
Ky.	64	50	4	312	-	-	-	-	-	82
Tenn.	312	390	19	409	4	-	2	3	17	251
Ala.	426	272	7	339	-	-	9	-	4	60
Miss.	369	271	-	155	2	-	3	1	5	-
W.S. CENTRAL	4,361	3,693	49	1,572	39	-	17	13	85	651
Ark.	111	71	11	165	23	-	1	1	12	89
La.	944	820	-	268	3	-	1	-	-	16
Okla.	91	88	3	216	13	-	2	12	51	122
Tex.	3,215	2,714	35	923	-	-	13	-	22	424
MOUNTAIN	422	381	8	373	11	1	7	-	6	119
Mont.	3	9	-	25	2	-	-	-	1	47
Idaho	19	14	2	16	1	-	-	-	1	2
Wyo.	10	7	-	2	1	-	-	-	1	11
Colo.	117	124	1	49	1	-	2	-	-	15
N. Mex.	89	72	3	74	-	-	-	-	1	10
Ariz.	99	83	2	148	-	1	4	-	-	26
Utah	13	16	-	21	6	-	1	-	-	6
Nev.	72	59	-	38	-	-	-	-	2	2
PACIFIC	2,480	2,244	80	2,364	4	9	64	-	1	346
Wash.	107	82	-	143	1	-	3	-	-	-
Oreg.	64	48	6	94	-	-	1	-	-	1
Calif.	2,235	2,069	68	1,908	3	9	57	-	1	274
Alaska	8	6	-	47	-	-	1	-	-	71
Hawaii	66	39	6	172	-	-	2	-	-	-
Guam	1	-	U	4	-	U	-	U	-	-
P.R.	332	352	7	195	-	-	2	-	-	30
V.I.	10	11	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	68	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending July 10, 1982 (27th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	639	430	147	29	17	16	36
Boston, Mass.	169	100	39	13	7	10	17
Bridgeport, Conn.	45	34	7	3	1	-	2
Cambridge, Mass.	28	23	5	-	-	-	1
Fall River, Mass.	35	29	4	2	-	-	-
Hartford, Conn.	54	37	12	3	1	1	1
Lowell, Mass.	24	19	3	-	1	1	1
Lynn, Mass.	30	16	11	1	2	-	-
New Bedford, Mass.	32	23	7	1	1	-	-
New Haven, Conn.	37	24	12	-	-	1	1
Providence, R.I.	51	33	16	-	1	1	2
Somerville, Mass.	9	8	1	-	-	-	2
Springfield, Mass.	49	31	11	2	2	2	6
Waterbury, Conn.	31	20	6	4	1	-	1
Worcester, Mass.	46	33	13	-	-	-	2
MID. ATLANTIC	2,399	1,561	570	145	70	53	95
Albany, N.Y.	51	35	8	3	-	5	-
Allentown, Pa.	23	20	3	-	-	-	1
Buffalo, N.Y.	110	68	32	3	4	3	9
Camden, N.J.	28	16	8	2	2	-	-
Elizabeth, N.J.	25	19	5	1	-	-	2
Erie, Pa.†	36	27	6	3	-	-	1
Jersey City, N.J.	65	38	15	2	5	5	3
N.Y. City, N.Y.	1,286	841	294	95	30	26	41
Newark, N.J.	46	24	15	4	1	2	2
Paterson, N.J.	20	10	10	-	-	-	2
Philadelphia, Pa.†	299	175	82	23	11	8	12
Pittsburgh, Pa.†	59	37	14	4	4	-	-
Reading, Pa.	23	20	3	-	-	-	1
Rochester, N.Y.	93	65	18	3	4	3	6
Schenectady, N.Y.	23	15	5	3	-	-	-
Scranton, Pa.†	30	21	6	-	2	1	1
Syracuse, N.Y.	83	52	22	4	5	-	1
Trenton, N.J.	42	24	12	5	1	-	2
Utica, N.Y.	19	14	4	-	1	-	-
Yonkers, N.Y.	30	20	8	2	-	-	1
E.N. CENTRAL	1,998	1,275	467	129	67	59	52
Akron, Ohio	63	45	13	1	2	2	-
Canton, Ohio	41	25	12	3	1	-	1
Chicago, Ill.	483	287	112	43	17	24	10
Cincinnati, Ohio	93	64	23	3	2	1	9
Cleveland, Ohio	155	88	47	10	5	5	2
Columbus, Ohio	140	89	28	13	6	4	2
Dayton, Ohio	74	45	19	5	4	1	1
Detroit, Mich.	229	130	63	22	9	5	4
Evansville, Ind.	46	35	6	3	2	-	2
Fort Wayne, Ind.	56	35	13	3	5	-	1
Gary, Ind.	31	15	8	3	5	-	-
Grand Rapids, Mich.	62	40	16	2	2	2	4
Indianapolis, Ind.	110	73	29	5	-	3	4
Madison, Wis.	22	15	4	2	-	1	2
Milwaukee, Wis.	130	81	38	3	3	5	2
Peoria, Ill.	37	24	8	4	-	1	1
Rockford, Ill.	37	25	8	4	-	-	3
South Bend, Ind.	33	23	8	-	-	2	-
Toledo, Ohio §	97	95	-	-	2	-	2
Youngstown, Ohio	58	41	12	-	2	3	2
W.N. CENTRAL	676	466	117	47	25	20	22
Des Moines, Iowa §	52	51	-	-	1	-	-
Duluth, Minn.	24	17	2	3	-	2	-
Kansas City, Kans.	25	15	5	1	2	2	-
Kansas City, Mo.	122	70	31	11	4	6	10
Lincoln, Nebr.	20	15	4	1	-	-	-
Minneapolis, Minn.	81	55	12	8	2	4	2
Omaha, Nebr.	87	65	14	4	1	3	3
St. Louis, Mo.	146	95	30	11	8	2	3
St. Paul, Minn.	50	36	11	3	-	-	-
Wichita, Kans.	68	47	8	5	7	1	4
S. ATLANTIC	1,119	643	282	113	39	40	41
Atlanta, Ga.	98	50	33	11	4	-	-
Baltimore, Md.	307	163	85	36	14	9	8
Charlotte, N.C.	47	29	11	3	2	1	2
Jacksonville, Fla.	91	51	25	7	6	2	2
Miami, Fla.	83	38	20	12	3	10	2
Norfolk, Va.	29	21	3	3	1	1	-
Richmond, Va.	75	45	20	4	3	3	4
Savannah, Ga.	69	42	18	5	1	3	9
St. Petersburg, Fla.	70	57	7	3	2	1	2
Tampa, Fla.	75	49	16	6	-	4	3
Washington, D.C.	122	69	27	19	1	6	5
Wilmington, Del.	52	29	17	4	2	-	4
E.S. CENTRAL	578	357	133	32	20	36	28
Birmingham, Ala.	71	44	19	5	1	2	-
Chattanooga, Tenn.	35	23	8	2	1	1	4
Knoxville, Tenn.	47	36	6	3	-	2	-
Louisville, Ky.	122	72	29	9	6	6	8
Memphis, Tenn.	129	77	35	6	4	7	9
Mobile, Ala.	48	33	7	-	1	7	3
Montgomery, Ala.	27	22	4	-	-	1	1
Nashville, Tenn.	99	50	25	7	7	10	3
W.S. CENTRAL	1,087	566	310	105	60	48	20
Austin, Tex.	29	19	6	2	2	-	-
Baton Rouge, La.	19	9	5	3	1	1	-
Corpus Christi, Tex.	37	25	7	3	2	-	-
Dallas, Tex.	143	69	42	18	6	8	-
El Paso, Tex.	48	21	19	2	5	1	2
Fort Worth, Tex.	79	45	23	7	2	2	4
Houston, Tex.	292	136	84	38	17	17	5
Little Rock, Ark.	44	21	15	1	5	2	3
New Orleans, La.	143	85	32	17	5	4	-
San Antonio, Tex.	129	73	39	7	8	2	3
Shreveport, La.	69	32	21	4	3	9	2
Tulsa, Okla.	55	31	17	1	4	2	1
MOUNTAIN	521	319	124	27	30	21	17
Albuquerque, N. Mex.	50	30	13	5	1	1	3
Colo. Springs, Colo.	32	21	6	2	1	2	4
Denver, Colo.	110	64	27	9	4	6	1
Las Vegas, Nev.	58	36	15	2	5	-	1
Ogden, Utah	17	13	2	-	-	2	3
Phoenix, Ariz.	110	72	25	5	6	2	-
Pueblo, Colo.	18	11	4	-	2	1	1
Salt Lake City, Utah	46	21	9	3	8	5	1
Tucson, Ariz.	80	51	23	1	3	2	3
PACIFIC	1,622	1,077	322	102	58	61	73
Berkeley, Calif.	24	18	2	3	1	-	-
Fresno, Calif.	51	35	10	3	2	1	3
Glendale, Calif.	15	11	3	-	-	1	-
Honolulu, Hawaii	55	33	13	4	2	3	6
Long Beach, Calif.	87	54	20	6	3	4	2
Los Angeles, Calif.	504	328	100	39	20	17	16
Oakland, Calif. §	77	75	-	-	1	-	3
Pasadena, Calif.	22	18	4	-	-	-	1
Portland, Oreg.	87	58	17	3	2	6	5
Sacramento, Calif.	55	34	13	4	2	2	4
San Diego, Calif.	103	67	19	6	5	6	6
San Francisco, Calif.	153	96	38	10	4	5	5
San Jose, Calif.	160	98	41	11	8	2	12
Seattle, Wash.	128	83	24	6	4	11	5
Spokane, Wash.	47	28	12	4	3	-	2
Tacoma, Wash.	54	41	6	3	1	3	3
TOTAL	10,619††	6,674	2,472	727	396	354	374

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Gynecomastia – Continued

Twenty-one new cases were detected at Fort Allen among Haitian males who had had no evidence of gynecomastia when examined in December. Of the 52 Haitian males transferred to Ft. Allen from El Paso and Otisville, six (11.5%) now have gynecomastia.

Analysis of serum specimens from participants in the case-control study at Fort Allen and at Krome North Service Processing Center, Miami, Florida, (*1*) for prolactin, luteinizing hormone, testosterone, estradiol, blood-urea-nitrogen, creatinine, serum glutamic oxaloacetic transaminase, serum glutamic pyruvic transaminase, bilirubin, creatinine phosphokinase, lactic dehydrogenase, and calcium showed no statistically significant differences between cases and controls. Additional analysis of sera from cases and controls at Krome for free testosterone, free estradiol, sex hormone binding globulin, and follicle stimulating hormone showed no statistically significant differences. However, the ratio of free testosterone to free estradiol (FTE/Fe_2) was lower in cases than in controls, $p = 0.051$.[*] Analysis of the Krome drinking water revealed no estrogen or estrogen-like contaminants.

Reported by PHS Chief Medical Officers, Fort Allen (Puerto Rico) and Krome North (Miami, Florida) Immigration and Naturalization Svc's Service Processing Centers; Center for Environmental Health, Epidemiology Program Office, Quarantine Div, Center for Prevention Svcs, Family Planning Div, Center for Health Promotion and Education, CDC.

Editorial Note: The epidemiologic findings at Fort Allen corroborate those at Krome (*1*), which showed that the cases of gynecomastia are spontaneously resolving and that the development and resolution of the process appear related to date of arrival. The lower FTE/Fe_2 for cases, as compared with controls, indicates a disturbance in the androgen-to-estrogen ratio; the development of gynecomastia is thought to be related to a decrease in this ratio (*2,3*). Two possible hypotheses for the cause of the gynecomastia remain: 1) a greatly improved diet for Haitians after arrival in the United States or 2) an exposure to an estrogen or estrogen-like substance during processing at Krome. Investigations are continuing.

References

1. CDC. Gynecomastia in Haitians—Puerto Rico, Florida, Texas, New York. MMWR 1982;31:205-6.
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[*] Wilcoxon signed rank test.

Current Trends

Influenza Surveillance Summary, 1981-1982 Season

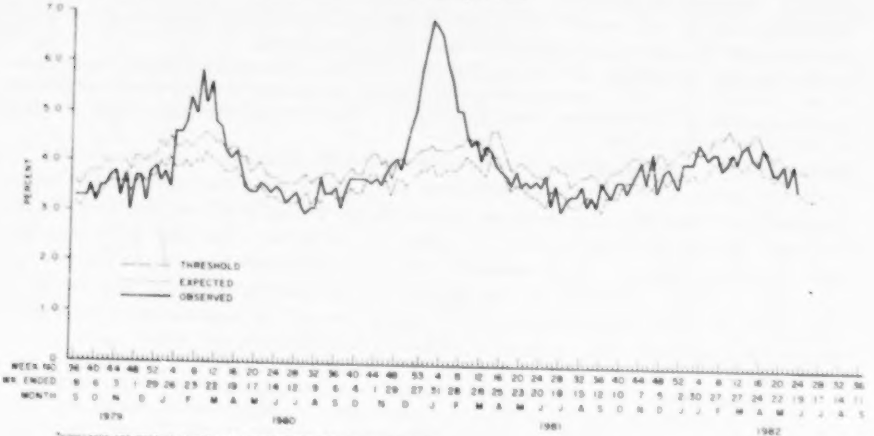
National data on influenza activity for the 1981-1982 season were obtained from three major sources: (a) weekly reports of mortality from 121 cities, including the ratio of pneumonia and influenza (P and I) deaths to total deaths, an index of the relative mortality attributable to influenza; (b) weekly reports of the number of respiratory specimens tested and the number and types of influenza isolates identified by 63 collaborating state, county, city, or military laboratories; and (c) weekly semi-quantitative estimates from each state health department of the extent of influenza-like morbidity indicated by their individual statewide

Influenza – Continued

surveillance systems. In addition, spontaneous reports of unusual cases and outbreaks of influenza were received by CDC.

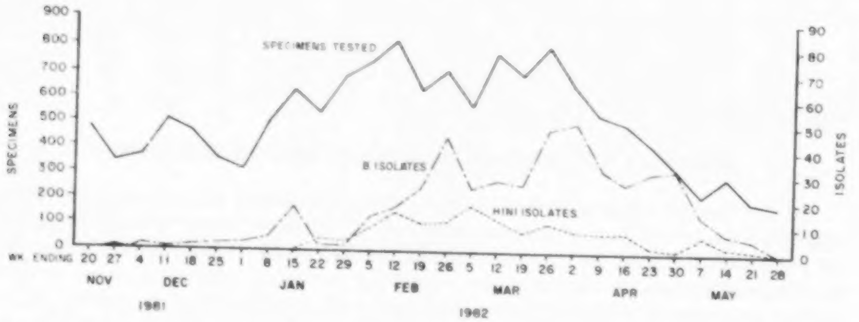
In terms of all the available criteria, the impact of influenza was low in the 1981-1982 season. Mortality statistics did not show a national increase in the ratio of deaths associated with P and I beyond the expected seasonal variation (Figure 1), despite presence of virus through May 1982 (Figure 2); widespread influenza activity was reported in only four states throughout the period of virus circulation (Figure 3). In the preceding season, by way of con-

FIGURE 1. Observed and expected ratio of deaths atrributed to pneumonia and influenza in 121 United States cities, September 1979-May 1982



*FORECASTS ARE MADE AT 4-WEEK INTERVALS EXCEPT DURING EPIDEMIC PERIODS

FIGURE 2. Specimens tested and influenza viruses isolated by collaborating laboratories (including military sources), United States, 1981-1982*



*Not shown are 5 influenza A(H3N2) isolates: 2 from Guam in December, 2 from Texas in March, and 1 from Florida in March.

Influenza – Continued

trast, the ratio of P and I deaths to total deaths was elevated for 13 weeks, and 32 states reported widespread influenza activity. Both influenza type B and influenza type A(H1N1) viruses were commonly isolated during the 1981-1982 season, but the total number of isolates reported to CDC by collaborating laboratories was approximately 600, compared with a range of 1,000 to 2,000 in the 5 preceding years (Figure 4).

Of the isolates obtained by the collaborating laboratories, 74% were influenza type B virus; 23 states isolated only influenza type B virus. Seventeen states isolated both influenza B and influenza A(H1N1) viruses, and one state isolated only influenza A(H1N1) virus. Influenza B virus outbreaks were first detected during the season in the southwestern states beginning January to February, then spread east and north. By the end of the season, influenza B had been identified in almost all regions of the country (Figures 5, 6). Throughout the winter, influenza A(H1N1) virus was more prevalent in the southwestern and Pacific regions than elsewhere, although some activity was detected in the eastern regions. Only a few influenza A(H3N2) strains, associated with sporadic cases in Florida and Texas, were isolated from residents of the continental United States during the 1981-1982 season. In Nevada swine influenza-like virus was isolated from an immunocompromised child (*1*).

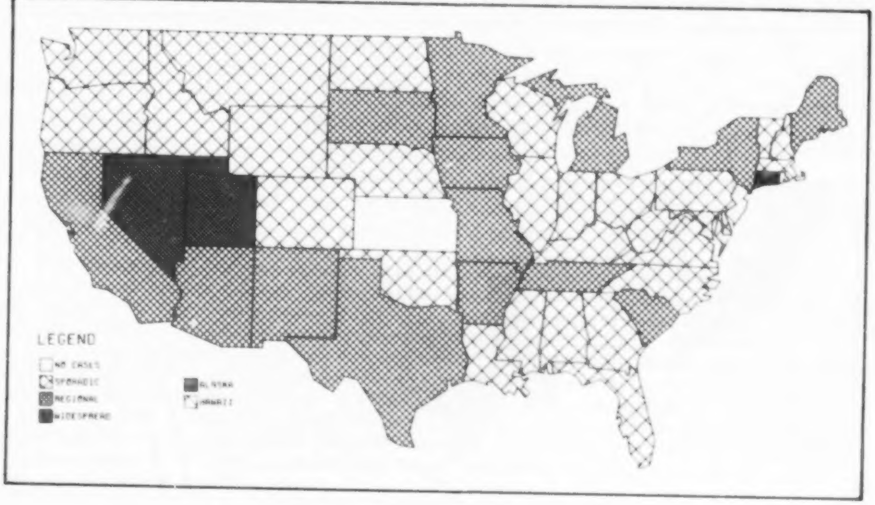
The predominant influenza B and influenza A(H1N1) viruses were frequently associated with reports of widely separated outbreaks among school children—typically with little evidence of community-wide impact, as judged by minimal increases in absenteeism for entire school districts and by lack of increases in numbers of hospital emergency room visits for influenza-like illness. From about March through May, occasional outbreaks of influenza B virus in nursing homes were documented.

Reported by Immunization Div, Center for Prevention Svcs, Consolidated Surveillance and Communications Activity, Epidemiology Program Office, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Reference

1. CDC. Swine influenza-like isolate—Nevada. MMWR 1982;31:195.

FIGURE 3. Highest level of influenza morbidity reported by state, January-June, 1982



Influenza — Continued

FIGURE 4. Isolation of influenza viruses in the United States reported to CDC by collaborating civilian and military laboratories, 1976-82

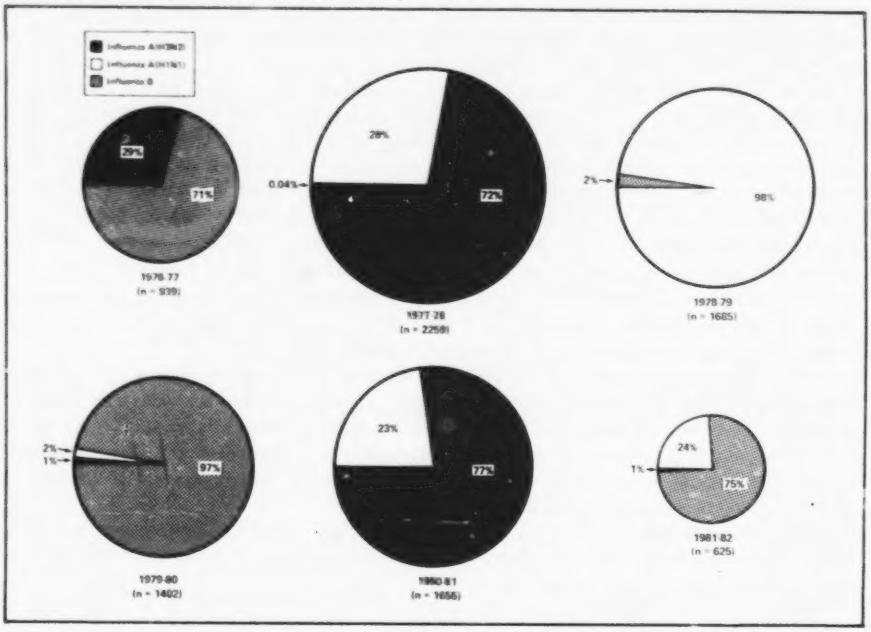
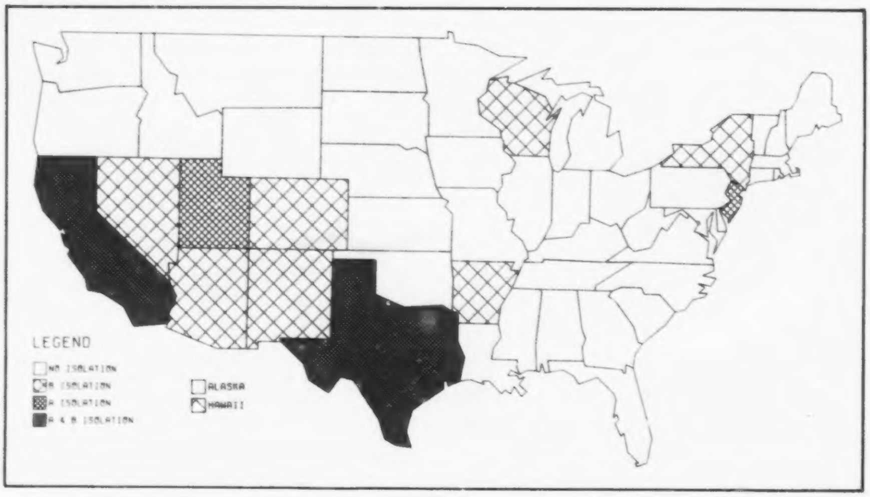
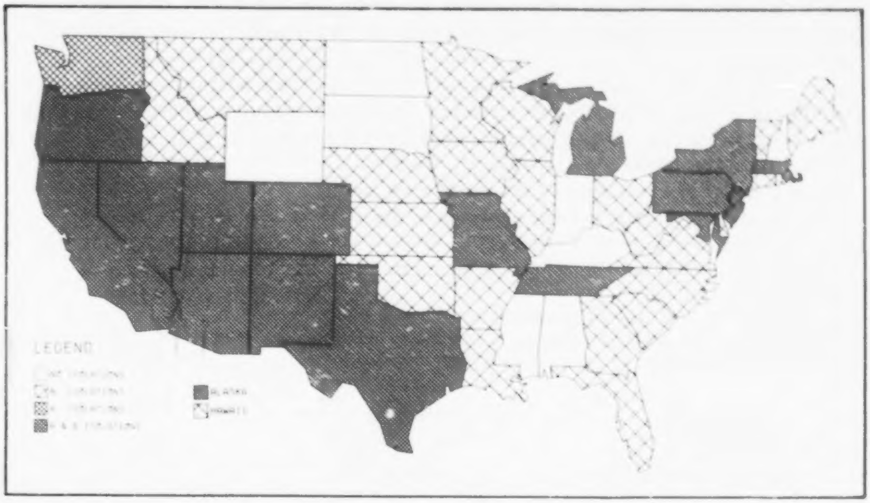


FIGURE 5. Influenza virus isolations for the United States, 1981-1982 season until February 1, 1982


LEGEND
NO ISOLATION
B ISOLATION
A ISOLATION
A & B ISOLATION
ALASKA
HAWAII

Influenza – Continued

FIGURE 6. Influenza virus isolations, United States, 1981-1982 season until June 1, 1982



Rabies — United States, 1981

In 1981, there were 7,211 laboratory-confirmed cases of animal rabies reported in the United States and its territories (Guam, Puerto Rico, and the United States Virgin Islands).

Forty-eight states and Puerto Rico reported rabid animals in 1981; only the District of Columbia, Guam, Hawaii, Vermont, and Virgin Islands reported no cases.

Seven types of animals accounted for 97% of all reported cases: skunks, 4,480 (62.1%); bats, 858 (11.9%); raccoons, 481 (6.7%); cattle, 465 (6.4%); cats, 285 (4.0%); dogs, 216 (3.0%); and foxes, 195 (2.7%). Wild animals accounted for 85% of the reported cases, and domestic animals 15%. Two cases of human rabies were reported in 1981 (*1,2*).

Bats and skunks continue to be the most widely distributed vectors, with confirmed cases caused by these two species in 46 states and 32 states, respectively. Raccoon rabies has become well established and is spreading in areas of northern Virginia, West Virginia, and

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The Morbidity and Mortality Weekly Report, circulation 109,745, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Rabies – Continued

Maryland (*3*). Virginia reported 102 cases of raccoon rabies in 1981, an increase of 1,350% over 1980 when seven cases were reported. West Virginia reported 22 cases of raccoon rabies in 1981, and Maryland reported six cases, all from a single county that borders on northern Virginia.

Reported by Viral and Rickettsial Zoonoses Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Reports of documented animal rabies have more than doubled in the United States in the last 3 years: 3,298 cases for 1978 and 7,211 cases for 1981. In 1981, for the first time, rabid cats outnumbered rabid dogs—by 32%.

More cases of skunk rabies and bat rabies were reported in 1981 than ever before. This substantial upsurge in rabies activity underscores the importance of efforts aimed at prevention and control. Vaccination of pets and livestock is the most effective control measure in preventing disease and subsequent human exposure.

References

1. CDC. Human rabies—Oklahoma. MMWR 1981;30:343-4,349.
2. CDC. Human rabies acquired outside the United States from a dog bite. MMWR 1981;30:537-40.
3. CDC. Rabies in raccoons—Virginia. MMWR 1981;30:353-5.

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31/28

CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

July 23, 1982 / Vol. 31 / No. 28

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Surveillance Summary

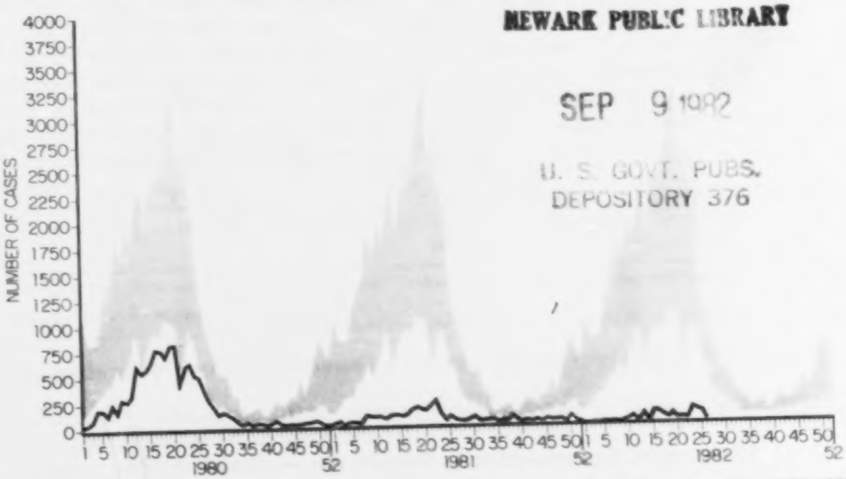
Measles — United States, First 26 Weeks, 1982

A total of 895 measles cases were reported in the United States during the first 26 weeks of 1982, a record low for the first 6 months of any year and a decrease of 60.6% from the 2,270 cases reported during the same period last year. Fewer than 100 measles cases in any 1 week were reported for the first 26 weeks of 1982, and record low numbers of cases were reported for 25 of those weeks. Fewer than 100 cases of measles per week have now been reported for 55 consecutive weeks.

As in previous years, incidence of reported measles peaked in late spring (Figure 1). However, the peak was considerably lower than in 1980 and 1981, years in which measles incidence had already declined to record lows.

The overall incidence for the United States during the first 26 weeks of 1982 was 0.4/100,000 total population. Only two states reported measles incidences of ≥1/100,000. In contrast, seven states in 1981 and 30 states in 1980 reported such rates for the first 26 weeks. The highest measles incidence in the first 26 weeks of 1982 was reported from Cali-

FIGURE 1. Reported measles cases,* United States, January 1980-June 1982



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*Shaded area represents maximum and minimum weekly values during 5-year period, 1975-1979.
Source: MMWR weekly reports.
CDC, CPS, IM

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Measles – Continued

fornia (2.27 cases/100,000 population), followed by Kansas (1.51), New York (0.78), Washington (0.59), and Michigan (0.42). Twenty-three states reported no measles cases, as compared with 13 states in 1981 and five in 1980. To date 47 states have reported no measles for at least 4 consecutive weeks. By contrast, 44 states in 1981 and 31 states in 1980 were free of reported measles for at least 4 consecutive weeks. During the first 26 weeks of 1982, a provisional total of 137 (4.4%) of the nation's 3,144 counties reported measles (Figure 2), compared with a provisional total of 247 (7.9%) counties during the same period in 1981.

A provisional total of 64 cases of imported measles* were reported to CDC during the first 26 weeks of 1982, an average of 2.5 cases per week. Twelve of these 64 imported cases led to an additional 164 cases within the United States. Measles importations and importation-related cases accounted for 25.5% of the total cases reported. Of the 64 measles importations, 42 (65.6%) involved U.S. citizens.

Reported by: Immunization Div, Center for Prevention Svcs, CDC.

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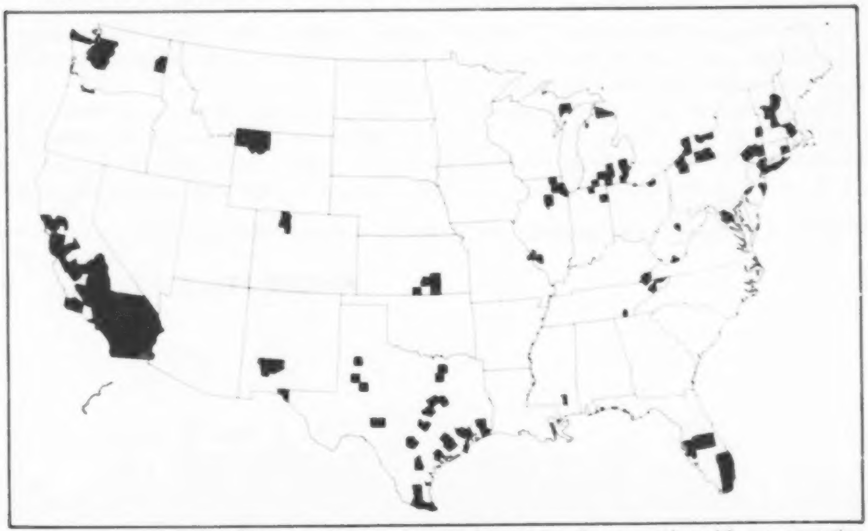
*A case is considered to be imported if a person has onset of rash ≤18 days after arriving in the United States from a foreign country and has no other apparent source of infection.

FIGURE 2. Cumulative measles cases by county, United States, weeks 1-26, 1982*†



*Alaska has 29 counties with one reporting measles; Hawaii has four counties with one reporting measles.

†Provisional data, subject to deletion of cases shown not to be measles.

Current Trends

Congenital Syphilis among Newborns — Texas, 1981

Thirty-seven cases of congenital syphilis were reported among newborns in Texas during 1981. An increase of 164% over the 14 cases reported in 1980, this represents the highest

Congenital Syphilis — Continued

number since 1971 when 52 cases were reported. Reported cases of early syphilis among women in Texas increased 47.3% from 2,024 in 1980 to 2,982 in 1981.

Data submitted with each congenital syphilis case were reviewed, and cases were classified according to the diagnostic criteria of Kaufman et al. (*1*). No case was classified as definite; 25 (67.6%) were classified as probable, based on serologic evidence and clinical findings; eight (21.6%) as possible, based on serologic evidence alone; and four (10.8%) as unlikely. The unlikely cases for which the diagnosis appeared to be based solely on evidence of maternal infection at delivery time have been excluded from the analysis that follows.

Of 33 infants evaluated, five (15.2%) were white, not of Hispanic origin; 16 (48.5%) were black, not of Hispanic origin; and 12 (36.4%) were Hispanic. Fourteen were male and 19, female. Thirty-one were live births, and two were stillborn. Two infants died within 6 days of delivery; prematurity was listed as contributing to both deaths.

The mean age of the 33 mothers was 21.7 years. Ten (30.3%) were 15-19 years, none of those was married. Among all 33 mothers, seven were married; three were separated; and 23 were single. The stage of the mother's infection at delivery time was primary or secondary in eight instances (24.2%) and early latent <1 year in 23 (69.7%); two patients (6.1%) had late syphilis.

Twenty-five of the 33 mothers received no prenatal care. Of the eight who received prenatal care, five began seeing a physician late in the third trimester, and three who had negative results of serologic tests for syphilis (STS) during the first trimester did not have a repeat STS in the third trimester.

Reported by R Pelosi, Infectious Disease Control Div, CD Alexander, MD, Bureau of Communicable Disease Svcs, CR Webb, Jr, MD, State Epidemiologist, Texas Dept of Health; Veneral Disease Control Div, Center for Prevention Svcs, CDC.

Editorial Note: Congenital syphilis is completely preventable. Its development can be related to two factors: when the pregnant woman becomes infected and how long she remains infected. Detection of untreated syphilis before delivery and prompt administration of appropriate therapy can often prevent congenital infection and can usually prevent complications among fetuses infected in utero.

Congenital syphilis can be eliminated or greatly reduced by: 1) preventing the spread of syphilis in the heterosexual community through rapid and thorough epidemiologic investigations; 2) educating females at risk of infection about the need to seek early and continuous prenatal care; and 3) encouraging medical care providers to perform serologic tests for syphilis on patients in the third, as well as the first, trimester.

References

1. Kaufman RE, Jones OG, Blount JH, Wiesner PJ. Questionnaire survey of reported early congenital syphilis: problems in diagnosis, prevention, and treatment. Sex Transm Dis 1977;4:135-9.

Epidemiologic Notes and Reports

Intestinal Perforation Caused by Larval *Eustrongylides* — Maryland

CDC recently received reports that three fishermen in Baltimore, Maryland, swallowed live minnows and developed severe abdominal pain within 24 hours.

Patient 1, a 23-year-old male, was seen at a community hospital on March 21, 1982, 2 days after swallowing two live minnows, because of progressive abdominal cramping pain of 24-hours' duration. During surgery, two roundworms were found, one penetrating the cecum, *Intestinal Perforation – Continued*

the other in the abdominal cavity. The transverse colon was found to be ecchymotic with punctate hemorrhage and exudates. On April 7, patient 2, a 25-year-old fisherman, was brought to the emergency room of the same hospital with similar symptoms 24 hours after swallowing one minnow. At laparotomy on April 9, two roundworms were found near a perforated cecum. Patient 3, a fisherman who swallowed minnows from the same source, later developed similar symptoms, which resolved 4 days later without surgery. Twelve other persons who also ingested live minnows reported no symptoms during 4 weeks of follow-up.

Sixty-seven minnows, collected in East Baltimore waters and secured from the same store at which the patients obtained their fish, were examined; 32 (48%) were infected with roundworms identical to those recovered from the two patients described above. Of the infected fish, six had two worms, one had three worms, and 26 had one worm each. The worms, 1-2 mm in diameter and 80-120 mm long, were identified as 4th-stage larval nematodes of the genus *Eustrongylides*.*

Reported by PF Guerin, MD, S Marapudi, MD, L McGrail, RN, CL Moravec, MD, E Schiller, DSc, Baltimore, EW Hopf, MD, R Thompson, Baltimore County Health Dept, FYC Lin, MD, E Israel, MD, State Epidemiologist, Maryland State Health Dept; JW Bier, PhD, GJ Jackson, PhD, Bureau of Foods, Div of Microbiology, US Food and Drug Administration; Parasitic Diseases Div, Center for Infectious Diseases, CDC.

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*Larval specimens have been deposited with the U.S. Department of Agriculture (USDA) in the U.S. National Museum, Helminthological Collection.

(Continued on page 389)

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		28th WEEK ENDING			CUMULATIVE, FIRST 28 WEEKS		
		July 17, 1982	July 18, 1981	MEDIAN 1977-1981	July 17, 1982	July 18, 1981	MEDIAN 1977-1981
Aseptic meningitis		167	220	144	2,512	2,515	1,817
Brucellosis		-	-	7	80	82	96
Encephalitis:	Primary (arthropod-borne & unspec.)	33	42	24	446	463	361
	Post-infectious	1	-	5	42	60	115
Gonorrhea:	Civilian	16,820	21,290	20,850	479,361	525,673	509,293
	Military	274	668	658	13,701	15,569	14,562
Hepatitis:	Type A	350	491	514	11,686	13,669	15,322
	Type B	380	413	311	10,980	10,772	8,880
	Non A, Non B	46	N	N	1,149	N	N
	Unspecified	163	253	176	4,823	5,887	5,351
Legionellosis		11	N	N	208	N	N
Leprosy		3	16	5	101	139	93
Malaria		32	35	35	498	750	357
Measles (rubeola)		33	35	198	1,003	2,351	12,132
Meningococcal infections:	Total	39	49	42	1,822	2,238	1,680
	Civilian	38	49	42	1,811	2,230	1,663
	Military	1	-	1	11	8	12
Mumps		34	44	142	3,883	2,083	10,255
Pertussis		26	27	26	570	559	628
Rubella (German measles)		37	25	141	1,791	1,537	10,124
Syphilis (Primary & Secondary):	Civilian	479	553	397	17,269	15,929	12,761
	Military	10	3	3	211	196	166
Tuberculosis		486	569	519	13,659	14,119	14,805
Tularemia		14	5	4	105	106	86
Typhoid fever		4	11	11	203	268	245
Typhus fever, tick-borne (RMSF)		46	66	54	481	649	497
Rabies, animal		131	106	97	3,362	4,119	2,574

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Ohio 1)	46	Paralytic	3
Cholera	-	Psittacosis (Utah 2)	67
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	-	Tetanus (Tex. 1)	39
Leptospirosis (Hawaii 1)	31	Trichinosis (Pa. 5)	59
Plague	5	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	17

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending July 17, 1982 and July 18, 1981 (28th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM 1982	CUM 1982	CUM 1982	CUM 1982	CUM 1981	1982	1982	1982	1982	1982	CUM 1982
UNITED STATES	167	80	446	42	479,361	525,671	350	380	46	163	11	101
NEW ENGLAND	8	3	16	5	11,873	12,910	3	12	1	7	1	1
Maine	–	–	–	–	562	649	1	3	–	–	–	–
N.H.	1	–	–	–	340	451	–	–	–	–	–	–
Vt.	–	–	–	–	233	229	–	–	–	–	–	–
Mass.	6	–	6	–	5,532	5,380	1	1	–	7	–	–
R.I.	1	–	–	–	805	679	1	2	–	–	–	–
Conn.	–	3	10	5	4,401	5,522	–	6	1	–	1	1
MID. ATLANTIC	17	2	54	12	60,793	61,349	46	99	4	16	5	4
Upstate N.Y.	9	2	19	3	9,886	10,165	16	27	1	6	–	1
N.Y. City	–	–	11	–	23,423	25,238	–	12	–	2	–	1
N.J.	2	–	11	–	10,993	11,720	14	40	3	4	–	1
Pa.	6	–	13	9	16,493	14,226	16	20	–	4	5	1
E.N. CENTRAL	28	–	96	7	65,194	80,428	49	43	2	12	2	3
Ohio	11	–	31	4	19,477	27,013	14	15	2	1	2	–
Ind.	2	–	23	2	8,068	7,152	8	5	–	9	–	–
Ill.	1	–	7	1	14,612	22,308	6	5	–	1	–	3
Mich.	14	–	33	–	16,639	16,773	20	18	–	1	–	–
Wis.	–	–	2	–	6,398	7,182	1	–	–	–	–	–
W.N. CENTRAL	14	9	31	3	23,581	24,949	11	23	3	6	–	3
Minn.	2	–	11	1	3,545	4,003	5	1	3	–	–	1
Iowa	–	1	11	1	2,495	2,733	–	4	–	2	–	–
Mo.	4	3	4	–	11,019	11,417	5	15	–	3	–	1
N. Dak.	–	–	–	–	321	343	–	–	–	–	–	–
S. Dak.	–	1	–	1	659	704	–	–	–	1	–	1
Nebr.	1	1	2	–	1,441	1,905	1	1	–	–	–	–
Kans.	7	3	3	–	4,101	3,844	–	2	–	–	–	–
S. ATLANTIC	48	16	66	6	114,502	129,566	37	70	16	27	2	5
Del.	–	–	–	–	1,967	2,037	–	–	–	–	–	–
Md.	2	–	13	–	16,228	14,531	–	8	1	7	–	2
D.C.	–	–	–	–	7,080	7,981	–	–	–	–	–	–
Va.	4	6	18	1	10,617	11,599	1	10	2	2	1	1
W. Va.	–	–	1	–	1,440	1,969	1	–	–	–	–	–
N.C.	8	–	6	1	20,564	19,905	3	7	–	3	–	–
S.C.	8	2	–	–	12,659	12,471	1	9	1	1	–	–
Ga.	4	1	–	–	9,483	20,417	5	7	–	2	–	–
Fla.	22	7	28	4	34,464	32,636	26	29	12	12	1	2
E.S. CENTRAL	3	10	25	2	42,554	43,379	10	19	4	2	–	–
Ky.	–	–	–	–	5,735	5,471	3	1	–	–	–	–
Tenn.	2	6	14	–	16,472	16,405	6	14	3	2	–	–
Ala.	–	3	8	2	12,787	13,187	–	2	1	–	–	–
Miss.	1	1	3	–	7,560	8,316	1	2	–	–	–	–
W.S. CENTRAL	18	23	55	1	69,960	68,649	68	41	2	60	1	15
Ark.	–	4	2	–	5,689	4,949	–	–	1	10	1	–
La.	4	6	8	–	12,996	10,720	7	6	1	4	–	–
Okla.	6	3	16	–	7,652	7,392	22	10	–	6	–	–
Tex.	8	10	29	1	43,623	45,588	39	25	–	40	–	15
MOUNTAIN	5	–	18	3	17,336	20,643	32	13	–	6	–	2
Mont.	–	–	–	–	723	740	1	–	–	–	–	–
Idaho	–	–	–	–	808	849	–	–	–	–	–	1
Wyo.	–	–	–	–	512	486	2	1	–	–	–	–
Colo.	4	–	8	1	4,614	5,522	2	6	–	1	–	–
N. Mex.	–	–	–	–	2,155	2,261	8	–	–	–	–	–
Ariz.	–	–	6	–	4,730	6,313	6	1	–	2	–	–
Utah	1	–	–	2	807	958	9	3	–	3	–	1
Nev.	–	–	4	–	2,987	3,516	4	2	–	–	–	–
PACIFIC	26	17	85	3	73,568	83,780	94	60	14	27	–	68
Wash.	4	–	9	–	5,886	6,887	4	2	1	–	–	6
Oreg.	–	–	1	–	4,181	5,044	7	6	–	2	–	–
Calif.	17	16	71	3	60,372	68,188	81	46	13	25	–	42
Alaska	–	1	3	–	1,832	2,064	–	3	–	–	–	1
Hawaii	5	–	1	–	1,297	1,597	2	3	–	–	–	19
Guam	U	–	–	–	53	78	U	U	U	U	U	–
P.R.	U	–	1	–	1,579	1,765	U	U	U	U	U	–
V.I.	–	–	–	–	121	101	–	–	–	–	–	–
Pac. Trust Terr.	U	–	–	–	187	239	U	U	U	U	U	10

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 17, 1982 and July 18, 1981 (28th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	32	498	33	1,003	2,351	39	1,822	34	3,883	26	37	1,791	1,537
NEW ENGLAND	2	26	-	9	72	4	99	3	156	-	1	15	109
Maine	-	-	-	-	5	1	6	1	34	-	-	-	33
N.H.	-	-	-	2	6	1	14	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	-	5	-	-	-	-
Mass.	1	20	-	2	51	2	25	-	76	-	-	3	21
R.I.	1	2	-	-	-	-	11	-	14	-	-	1	-
Conn.	-	4	-	3	8	-	37	2	15	-	1	3	12
MID. ATLANTIC	2	66	3	153	761	12	328	6	246	4	1	86	185
Upstate N.Y.	1	15	2	103	198	4	108	3	51	2	1	41	82
N.Y. City	-	21	1	42	59	1	58	3	41	-	-	31	47
N.J.	-	20	-	4	50	5	69	-	36	-	-	14	46
Pa.	1	10	-	4	454	2	93	-	118	2	-	-	10
E.N. CENTRAL	1	33	1	66	73	3	218	12	2,104	6	3	151	329
Ohio	-	9	-	1	15	1	83	7	1,543	2	-	-	1
Ind.	-	1	-	2	8	-	22	-	33	1	-	26	113
Ill.	-	3	-	23	21	-	58	-	162	-	-	55	80
Mich.	1	18	1	40	28	2	43	5	285	1	3	45	33
Wis.	-	2	-	-	1	-	12	-	81	2	-	25	102
W.N. CENTRAL	-	14	-	39	7	1	77	1	525	2	-	59	75
Minn.	-	2	-	-	3	-	19	1	402	-	-	9	7
Iowa	-	5	-	-	1	-	5	-	29	2	-	-	4
Mo.	-	3	-	2	1	1	23	-	15	-	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	3	-	1	-	-	1	-
Nebr.	-	3	-	-	1	-	9	-	-	-	-	-	1
Kans.	-	1	-	37	1	-	12	-	78	-	-	11	61
S. ATLANTIC	5	74	1	34	329	9	364	1	218	9	2	66	122
Del.	-	-	-	-	-	-	-	-	10	-	-	1	1
Md.	3	12	1	3	2	1	22	-	21	2	-	33	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	1	23	-	14	6	2	40	-	30	1	1	13	4
W. Va.	-	5	-	2	8	-	7	-	81	-	-	1	22
N.C.	1	2	-	-	3	3	76	-	10	1	-	1	4
S.C.	-	3	-	-	-	-	40	-	13	1	-	1	8
Ga.	-	10	-	-	107	2	79	-	10	4	-	5	35
Fla.	-	16	-	14	202	1	98	1	43	-	1	11	47
E.S. CENTRAL	1	6	-	8	2	1	122	-	32	1	-	39	23
Ky.	-	4	-	1	-	-	20	-	9	-	-	22	14
Tenn.	-	-	-	6	-	1	51	-	13	1	-	1	8
Ala.	-	-	-	-	2	-	44	-	5	-	-	-	1
Miss.	1	2	-	1	-	-	7	-	5	-	-	16	-
W.S. CENTRAL	1	34	-	14	767	1	214	1	144	1	3	97	125
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	2
La.	-	3	-	2	-	-	37	-	3	-	-	1	9
Okla.	1	5	-	-	5	1	21	-	-	-	-	3	-
Tex.	-	23	-	12	761	-	144	1	135	1	3	92	114
MOUNTAIN	-	15	-	5	31	2	86	3	61	-	7	58	75
Mont.	-	-	-	-	-	-	4	-	3	-	1	5	3
Idaho	-	1	-	-	1	-	6	-	3	-	-	1	3
Wyo.	-	-	-	-	-	-	5	-	2	-	2	7	3
Colo.	-	8	-	5	8	1	34	-	8	-	-	4	30
N. Mex.	-	2	-	-	8	-	13	-	-	-	-	5	5
Ariz.	-	3	-	-	4	1	14	2	29	-	1	8	18
Utah	-	1	-	-	-	-	7	1	12	-	3	19	4
Nev.	-	-	-	-	10	-	3	-	4	-	-	9	9
PACIFIC	20	230	28	675	309	6	314	7	397	3	20	1,220	494
Wash.	-	11	-	31	3	-	31	1	61	-	-	32	55
Oreg.	1	9	-	-	3	-	63	-	-	-	-	5	48
Calif.	19	208	28	640	301	6	207	6	323	3	20	1,174	380
Alaska	-	-	-	1	-	-	10	-	6	-	-	1	-
Hawaii	-	2	-	3	2	-	3	-	7	-	-	8	11
Guam	U	1	U	5	6	U	2	U	3	U	U	2	1
P.R.	U	4	U	76	235	U	7	U	43	U	U	6	3
V.I.	-	-	-	-	11	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	1	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 17, 1982 and July 18, 1981 (28th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES Animal
	CUM 1982	CUM 1981	1982	CUM 1982	CUM 1982	1982	CUM 1982	1982	CUM 1982	CUM 1982
UNITED STATES	17,249	15,929	486	13,659	105	4	203	46	481	3,362
NEW ENGLAND	293	338	10	365	2	-	14	-	5	26
Maine	1	2	3	30	-	-	-	-	-	19
N.H.	1	12	-	11	-	-	-	-	1	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	198	225	6	240	2	-	10	-	2	4
R.I.	13	19	-	16	-	-	-	-	1	-
Conn.	79	67	1	61	-	-	2	-	1	3
MID. ATLANTIC	2,348	2,425	84	2,277	7	1	33	4	16	93
Upstate N.Y.	240	231	15	387	7	1	4	1	1	46
N.Y. City	1,412	1,458	37	836	-	-	20	-	1	-
N.J.	315	329	19	468	-	-	5	1	10	5
Pa.	381	407	13	586	-	-	4	2	4	42
E.N. CENTRAL	905	1,088	96	2,098	-	-	15	-	41	383
Ohio	164	149	28	359	-	-	7	-	40	54
Ind.	105	110	9	277	-	-	-	-	-	57
Ill.	423	603	45	837	-	-	3	-	1	196
Mich.	155	177	8	512	-	-	5	-	-	3
Wis.	58	49	6	113	-	-	-	-	-	73
W.N. CENTRAL	328	311	11	408	13	-	7	1	13	747
Minn.	64	107	1	71	-	-	4	-	-	124
Iowa	19	13	-	47	1	-	1	1	3	236
Mo.	198	166	9	192	9	-	1	-	5	69
N. Dak.	4	6	-	7	-	-	-	-	-	65
S. Dak.	-	2	1	17	-	-	-	-	-	61
Nebr.	8	3	-	15	1	-	-	-	-	90
Kans.	35	14	-	59	2	-	1	-	5	102
S. ATLANTIC	4,702	4,182	90	2,793	8	-	29	25	271	570
Del.	9	7	-	24	-	-	-	-	-	-
Md.	259	317	U	315	1	-	7	1	28	31
D.C.	265	350	6	110	-	-	-	-	-	-
Va.	337	370	U	305	1	-	2	3	32	296
W. Va.	19	13	4	84	-	-	3	-	4	31
N.C.	326	325	16	447	-	-	-	15	119	33
S.C.	249	276	19	275	5	-	3	5	63	30
Ga.	971	1,070	15	412	-	-	-	-	23	112
Fla.	2,267	1,452	30	821	1	-	14	1	2	37
E.S. CENTRAL	1,211	1,017	50	1,265	6	-	14	5	31	400
Ky.	66	50	11	323	-	-	-	-	-	82
Tenn.	318	392	9	418	4	-	2	3	20	254
Ala.	437	292	16	355	-	-	9	1	5	64
Miss.	390	283	14	169	2	-	3	1	6	-
W.S. CENTRAL	4,499	3,835	58	1,630	51	3	20	10	95	664
Ark.	114	71	6	171	34	-	1	3	15	94
La.	979	881	-	268	3	1	2	-	-	17
Okla.	99	89	6	222	14	-	2	1	52	124
Tex.	3,307	2,794	46	969	-	2	15	6	28	429
MOUNTAIN	432	403	15	388	13	-	7	-	7	126
Mont.	3	9	-	25	2	-	-	-	2	51
Idaho	19	14	-	16	1	-	-	-	1	2
Wyo.	11	7	-	2	1	-	-	-	1	11
Colo.	121	130	1	50	3	-	2	-	-	17
N. Mex.	89	78	2	76	-	-	-	-	1	11
Ariz.	102	80	10	158	-	-	4	-	-	26
Utah	13	16	2	23	6	-	1	-	-	6
Nev.	74	69	-	38	-	-	-	-	2	2
PACIFIC	2,531	2,330	72	2,435	5	-	64	1	2	353
Wash.	107	89	3	146	1	-	3	-	-	-
Oreg.	66	48	4	98	-	-	1	-	-	1
Calif.	2,282	2,146	64	1,972	3	-	57	1	2	280
Alaska	9	7	-	46	1	-	1	-	-	72
Hawaii	67	40	1	173	-	-	2	-	-	-
Guam	1	-	U	4	-	U	-	U	-	-
P.R.	332	374	U	195	-	U	2	U	-	30
V.I.	13	11	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	68	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending July 18, 1982 (28th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	642	425	139	27	27	24	37
Boston, Mass.	194	120	42	9	7	16	17
Bridgeport, Conn.	38	29	8	1	-	-	3
Cambridge, Mass.	26	18	8	-	-	-	3
Fall River, Mass.	22	17	2	3	-	-	-
Hartford, Conn.	58	30	21	1	5	1	-
Lowell, Mass.	24	15	8	1	-	-	2
Lynn, Mass.	19	14	4	-	-	1	-
New Bedford, Mass.	26	20	4	2	-	-	-
New Haven, Conn.	43	26	11	2	2	2	5
Providence, R.I.	63	47	9	2	3	2	2
Somerville, Mass.	5	4	-	1	-	-	-
Springfield, Mass.	35	23	9	2	-	1	2
Waterbury, Conn.	39	26	2	1	10	-	1
Worcester, Mass.	50	36	11	2	-	1	2
MID. ATLANTIC	2,560	1,722	542	176	63	57	85
Albany, N.Y.	50	35	6	5	1	3	1
Allentown, Pa.	15	13	2	-	-	-	-
Buffalo, N.Y.	100	71	20	2	6	1	3
Camden, N.J.	34	22	9	2	-	1	-
Elizabeth, N.J.	28	16	9	3	-	-	-
Erie, Pa.†	45	34	8	1	1	1	-
Jersey City, N.J.	50	33	10	3	2	2	1
N.Y. City, N.Y.	1,377	924	275	113	36	29	54
Newark, N.J.	45	17	13	7	3	5	2
Paterson, N.J.	24	20	2	-	1	1	2
Philadelphia, Pa.†	348	234	80	20	5	9	13
Pittsburgh, Pa.†	58	32	22	2	2	-	1
Reading, Pa.	18	15	2	-	1	-	1
Rochester, N.Y.	123	82	24	12	1	4	5
Schenectady, N.Y.	35	29	6	-	-	-	-
Scranton, Pa.†	38	25	9	2	2	-	1
Syracuse, N.Y.	92	64	25	1	2	-	-
Trenton, N.J.	18	10	7	1	-	-	-
Utica, N.Y.	25	20	4	1	-	-	-
Yonkers, N.Y.	37	26	9	1	-	1	1
E.N. CENTRAL	2,297	1,408	573	162	74	80	62
Akron, Ohio	80	57	12	1	1	9	-
Canton, Ohio	48	33	6	4	2	3	2
Chicago, Ill.	504	280	138	54	13	19	12
Cincinnati, Ohio	172	117	44	3	5	3	13
Cleveland, Ohio	177	104	48	15	6	4	1
Columbus, Ohio	138	78	40	10	5	5	2
Dayton, Ohio	101	61	23	9	4	4	1
Detroit, Mich.	252	148	64	21	13	6	7
Evansville, Ind.	36	25	10	-	-	1	-
Fort Wayne, Ind.	60	42	9	6	2	1	3
Gary, Ind.	21	14	5	2	-	-	-
Grand Rapids, Mich.	54	34	10	1	5	4	2
Indianapolis, Ind.	195	120	53	9	8	5	3
Madison, Wis.	56	36	12	5	3	-	3
Milwaukee, Wis.	152	91	38	10	3	10	-
Peoria, Ill.	43	32	10	-	-	1	5
Rockford, Ill.	35	21	9	3	1	1	2
South Bend, Ind.	43	30	12	1	-	-	3
Toledo, Ohio §	64	45	12	2	1	4	1
Youngstown, Ohio	66	40	18	6	2	-	2
W.N. CENTRAL	717	482	140	43	27	24	21
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn.	32	19	6	3	3	1	1
Kansas City, Kans.	35	22	7	3	1	2	2
Kansas City, Mo.	85	50	14	13	5	3	1
Lincoln, Nebr.	33	24	6	2	-	1	-
Minneapolis, Minn.	79	57	14	2	5	1	-
Omaha, Nebr.	93	58	28	3	1	3	5
St. Louis, Mo.	166	110	29	12	5	10	6
St. Paul, Minn.	90	64	17	4	4	1	-
Wichita, Kans.	51	27	19	1	2	2	6

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,034	642	228	85	29	50	38
Atlanta, Ga.	176	106	32	19	8	11	2
Baltimore, Md.	134	87	30	10	3	4	1
Charlotte, N.C.	67	43	13	5	3	3	5
Jacksonville, Fla.	90	57	20	6	2	5	4
Miami, Fla.	110	62	32	8	2	6	1
Norfolk, Va.	46	27	13	2	-	4	3
Richmond, Va.	84	49	23	6	2	4	6
Savannah, Ga.	55	31	10	9	3	2	2
St. Petersburg, Fla.	89	70	12	3	-	4	4
Tampa, Fla.	72	53	11	4	3	1	9
Washington, D.C.	73	36	22	9	1	5	-
Wilmington, Del.	38	21	10	4	2	1	1
E.S. CENTRAL	664	384	184	43	22	31	30
Birmingham, Ala.	98	54	31	8	4	1	-
Chattanooga, Tenn.	65	44	14	5	1	1	8
Knoxville, Tenn.	56	39	13	-	2	2	1
Louisville, Ky.	108	57	33	7	2	9	3
Memphis, Tenn.	132	69	44	5	5	9	7
Mobile, Ala.	55	36	15	3	1	-	2
Montgomery, Ala.	36	18	8	7	1	2	1
Nashville, Tenn.	114	67	26	8	6	7	8
W.S. CENTRAL	1,631	891	417	167	99	57	51
Austin, Tex.	95	65	16	7	4	3	3
Baton Rouge, La.	55	31	13	3	6	2	4
Corpus Christi, Tex.	40	24	5	7	3	1	1
Dallas, Tex.	205	114	53	19	14	5	4
El Paso, Tex.	68	34	17	10	5	2	2
Fort Worth, Tex.	89	48	27	6	4	4	6
Houston, Tex.	568	272	150	82	43	21	16
Little Rock, Ark.	59	34	16	2	3	4	4
New Orleans, La.	141	83	41	10	1	6	-
San Antonio, Tex.	168	97	44	13	8	6	7
Shreveport, La.	37	23	11	2	-	1	1
Tulsa, Okla.	106	66	24	6	8	2	3
MOUNTAIN	626	362	153	48	31	32	22
Albuquerque, N.Mex.	63	37	17	3	5	1	4
Colo. Springs, Colo.	29	17	8	2	2	-	1
Denver, Colo.	118	63	27	13	5	10	1
Las Vegas, Nev.	69	30	22	9	6	2	2
Ogden, Utah	20	17	-	1	1	1	2
Phoenix, Ariz.	151	88	40	11	4	8	3
Pueblo, Colo.	34	24	9	1	-	-	-
Salt Lake City, Utah	50	28	11	3	2	6	1
Tucson, Ariz.	92	58	19	5	6	4	8
PACIFIC	1,691	1,099	361	105	66	58	78
Berkeley, Calif.	22	16	3	-	1	2	-
Fresno, Calif.	53	34	11	1	5	2	4
Glendale, Calif.	27	24	3	-	-	-	-
Honolulu, Hawaii	60	33	15	6	3	3	7
Long Beach, Calif.	85	53	23	3	2	4	5
Los Angeles, Calif.	397	241	92	36	16	11	16
Oakland, Calif. §	75	73	-	-	1	-	3
Pasadena, Calif.	33	21	8	2	1	1	3
Portland, Oreg.	117	86	21	5	3	2	8
Sacramento, Calif.	78	47	20	7	3	1	3
San Diego, Calif.	132	82	28	11	3	8	6
San Francisco, Calif.	162	96	37	17	6	6	4
San Jose, Calif.	147	90	34	8	11	4	10
Seattle, Wash.	198	134	42	7	5	10	3
Spokane, Wash.	68	44	15	1	4	4	4
Tacoma, Wash.	37	25	9	1	2	-	2
TOTAL	11,862††	7,415	2,737	856	438	413	424

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Intestinal Perforation – Continued

Editorial Note: Nematodes of the genus *Eustrongylides* (Family Dioctophymidae Railliet, 1915) are parasitic as adults in the gastrointestinal tract of fish-eating birds and as larvae in the connective tissue or body cavity of freshwater fish (*1*). Amphibians, reptiles, and mammals (rarely) may become infected with larval *Eustrongylides* spp. and may play an ecological role as paratenic or transport hosts. Moreover, extensive larval migration in accidentally and experimentally infected reptilian, amphibian, and avian hosts has been observed and has sometimes been associated with high mortality (*1-3*), suggesting a possible pathologic role for *Eustrongylides* spp. However, no human infections have been reported to CDC.† Although data are incomplete, infection by larval *Eustrongylides* spp. is widespread and common in numerous species of freshwater fish. The high rates of infection for minnows (*Fundulus* spp.) reported here and earlier (*3*) may indicate a high degree of risk for persons who choose to eat these fish without cooking them first.

References

1. Lichtenfels JR, Lavies B. Mortality in red-sided garter snakes, *Thamnophis sirtalis parietalis*, due to larval nematode, *Eustrongylides* sp. Lab Anim Sci 1976;26:465-7.
2. Abram JB, Lichtenfels JR. Larval *Eustrongylides* sp. (Nematoda: Dioctophymatoidea) from otter, *Lutra canadensis*, in Maryland. Proceeding of the Helminthological Society of Washington 1974;41:253.
3. Von Brand T, Cullinan RP. Physiological observations upon a larval *Eustrongylides*. V. The behavior in abnormal warmblooded hosts. Proceeding of the Helminthological Society of Washington 1943; 10:29-33.

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†The USDA National Helminthological Collection contains a single larval specimen obtained from a human (*2*).

Silo-Filler's Disease in Rural New York

On September 18, 1981, at a farm in Mohawk, New York, a 39-year-old farmhand was overcome while climbing up the chute of a recently filled concrete stave silo and later died of presumed silo-filler's disease. The case report follows.

In the preceding 10 days, the farm owner had filled this silo with Sudex grass and chopped corn silage. On September 18, he asked a farmhand to climb up the unloading chute inside the silo and toss out fresh silage. When the farmhand climbed the chute, he became short of breath and confused and had to descend. He made a second attempt but again had to climb down and was noted to be cyanotic, pale, and diaphoretic.

At a local hospital, the examining physician noted cyanosis and respiratory distress; blood pressure of 84/60; pulse, 128; respiration, 32; and temperature, 37.5 C (99.5 F). The patient had wheezes and crackles on auscultation of his chest but no signs of consolidation; after asthma was diagnosed, he was treated with epinephrine, intravenous aminophylline, and steroids. White blood count was 31,000; hematocrit, 57.8%; and hemoglobin, 18.6 gm. Arterial blood gas examination while on 2 liters of nasal oxygen showed pH 7.35; $PaCO_2$, 32 mm Hg; PaO 45 mm Hg; and a calculated bicarbonate of 17.6 mEq/L. An electrocardiogram showed a sinus tachycardia, and a plain chest radiograph disclosed extensive fluffy bilateral infiltrates.

The patient was moved to the intensive care unit, where a tentative diagnosis of pneumonia was made. He became agitated, would not wear an oxygen mask, and remained in shock. Five hours after admission, he experienced cardiopulmonary arrest and died despite vigorous efforts to resuscitate him.

Post-mortem examination the next day showed grossly edematous lungs with pleural effusions (200 ml) on both sides; the right lung weighed 900 gm, and the left weighed 1,000 gm.

Silo-Filler's Disease – Continued

Microscopy of the lungs showed alveoli flooded with proteinaceous material; the alveolar walls were intact. No bacteria, fungi, or evidence of viral disease was found. Early bronchiolitis was present; no evidence of asthma could be seen. There were no granulomas or hyaline membranes.

An investigation at the farm 2 weeks later failed to uncover any problem with the corn silage, which was still being unloaded. The cows were eating normally and producing the usual amounts of milk. The farmer reported that, following his farmhand's illness, he had turned on the silo blower and sent another worker up to toss out corn; no ill effects had occurred.

Several factors support the diagnosis of silo-filler's disease, an illness caused by the inhalation of nitrogen oxides: i.e., rapid onset of symptoms following a recent filling of the silo and histology classic for toxic exposure.

Reported by DS Pratt, MD, JJ May, MD, Section of Pulmonary Medicine, Mary Imogene Bassett Hospital, Cooperstown; R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; Immunology Section, Laboratory Investigations Br, NIOSH, CDC.

Editorial Note: The case outlined above is typical for massive exposure to nitrogen oxides. Silo-filler's disease represents an occupational hazard associated with ensiled crops. Laboratory studies have shown that toxic levels of NO, NO_2, and N_2O_4 are regularly produced in silos (*1,2*). Because these oxides are dense, they tend to settle in the chute and around the base of the silo, and exposure often occurs without anyone's entering the silo. Although NO_2 is brown and has an odor, N_2O_4 is colorless and odorless, and exposure can occur without warning (*3*). If undetected by smell or sight, the potent nitrogen oxides may be inhaled deep into the lungs, where contact with the mucosal moisture produces nitric acid, which burns the airways, respiratory bronchioles, and alveoli. In fatal exposures, vascular collapse and the outpouring of serum rapidly produce shock and death. In another clinical course associated with silo-filler's disease, exposure causes cough and chest tightness. Although these conditions clear spontaneously, illness may return in three weeks with severe symptoms of fever, chills, and shortness of breath. Biopsies show a bronchiolitis obliterans with granuloma formation. This second pattern appears to respond to steroids (*4*).

Fatal and serious exposures to nitrogen oxides are not unique to farming but have been reported in association with arc and acetylene welding (*4*), burning cellulose nitrate (*5*), and dynamite blasting (*6*). Diesel fumes, furnace gases, and chemical processes involving the generation of NO_2 (*3*) are also potentially dangerous.

It is possible to prevent this type of exposure in the farm industry if farmers are aware of the following dangers and use the suggested safety measures: 1) Silos begin to produce NO_2 within 4 hours after filling, and no one should enter or come in close contact with a recently filled silo. 2) Some crops (oats, corn) produce more NO_2 than others, and heavily fertilized crops, cloudy conditions, and rain raise the risk of NO_2 production. 3) Although NO_2 levels are generally low and within a safe range after 2 weeks, dangerous amounts may remain for months if the silo has not been opened (*7*). 4) If possible, enclosed areas should be ventilated for 20 minutes before anyone enters, and individuals should be equipped with a full-face mask and an air supply.

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Ciguatera Fish Poisoning — Bahamas, Miami

On March 6, 1982, the U.S. Coast Guard in Miami, Florida, received a request for medical assistance from an Italian freighter located in waters off Freeport, Bahamas. Numerous crew members were ill with nausea, vomiting, and muscle weakness and required medical evacuation for hospitalization and treatment.

A total of 14 ill crew members were airlifted to three Florida hospitals. Three were seen in emergency rooms and later released. Eleven were hospitalized; seven required admission to intensive care units. All patients were Italian males, age 24-40 years; symptoms included diarrhea—12 patients (86%), vomiting—11 (79%), paresthesias—11 (79%), hypotension—10 (71%), peripheral muscular weakness—9 (65%), nausea—8 (57%), abdominal cramping—6 (43%), pruritis—4 (29%), and peripheral numbness—2 (14%). These findings were consistent with ciguatera fish poisoning, and an epidemiologic investigation was initiated.

The ship employed 26 crew members and is permanently based near Freeport, where it ferries petroleum products ashore from large tankers. On March 4, a crew member caught a 25-pound barracuda while fishing from the ship. On March 6, 14 crew members cooked and ate the barracuda; all became ill within 6 hours. None of the 12 crew members who did not eat the barracuda became ill. Six of the ill crew members reported becoming sick 45 minutes to 6 hours after the implicated meal (median: 2.5 hours). All 14 crew members eventually recovered without sequelae and returned to work. Median length of hospital stay was 6 days.

Reported by SC Royal, Miami Quarantine Station, MA Poli, TJ Mende, DG Baden, Dept of Biochemistry, University of Miami, School of Medicine, RM Galbraith, TB Higerd, Dept of Clinical Immunology and Microbiology, Medical University of South Carolina, M Enriquez, MD, Dade County Health Dept, HJ Janowski, MPH, Acting State Epidemiologist, Florida Dept of Health and Rehabilitative Svcs; Field Services Div, Epidemiology Program Office, CDC.

Editorial Note: Ciguatera is a human intoxication syndrome associated with the consumption of marine tropical reef fishes. Although recent surveys indicate that poisonings are relatively uncommon in Florida (*1,2*), one investigator recorded 280 intoxications from January 1978 to June 1980 (*2*).

The ichthyosarcotoxins are thought to be accumulated through the food chain, the toxins being produced by microalgae known as dinoflagellates (*3,4*). The toxins are lipid-soluble and appear to accumulate in the flesh, fatty tissue, and viscera of large predatory species of fish, such as barracuda, grouper, and snapper (*5,6*). The isolation, purification, and characterization of the suspected toxins have been hampered by limited availability of authentic ciguatoxic fish, lack of a specific sensitive assay, and the low concentration and heterogeneity of toxins present in specimens.

The assessment of toxicity most often used is the mouse bio-assay. Based on signs elicited following intraperitoneal (IP) injection, it includes, but is not limited to inactivity, diarrhea, labored breathing, cyanosis, piloerection, tremors, paralysis, and staggering gait. Death occurs when the injection is given in higher doses, with a lethal dose, 50% kill (LD_{50}), of

Ciguatera Fish Poisoning — Continued

0.45 µg/kg for purified toxin (*5*). Thus, ciguatoxin is one of the most potent marine toxins known. The barracuda's head was toxic by mouse bio-assay with an LD_{50} (IP) of 2-5 gram equivalents of original fish meat. Thin-layer chromatographic separation of extracts revealed the presence of at least two major toxins. Further purification is under way to define more clearly the toxin(s) implicated in this outbreak.

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As of October 1, 1982, the *Morbidity and Mortality Weekly Report* (MMWR) and the *Annual Summary* will continue to be provided without charge to specific groups including, among others, State Health Officials, Deans of Schools of Public Health, and disseminators of public health information. These groups and individuals will be specifically notified during the next few weeks. As of that same date, these publications will become available to others on a paid subscription basis. Details of how to obtain the MMWR and the subscription price will be announced in subsequent issues of the MMWR.

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CENTERS FOR DISEASE CONTROL

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Current Trends

Oral Contraceptives and Cancer Risk

An initial analysis of an ongoing, multicenter case-control study indicates that women who have used oral contraceptives are approximately half as likely to develop ovarian and endometrial cancer as women who have never used them and that, despite previous concerns, contraceptive use does not appear to increase a woman's risk of breast cancer.

The study used population-based cancer registries in eight geographic regions across the United States to identify women 20-54 years of age with newly diagnosed breast, ovarian, or endometrial cancer. Controls were women of the same ages without known cancer, chosen from the same geographic areas by dialing randomly selected telephone numbers.

The relative risk of ovarian cancer for women who had used oral contraceptives for at least 1 month, as compared with women who had never used them, was 0.6 (95% confidence limits 0.4-0.9). The longer a woman had used oral contraceptives, the lower her risk of developing ovarian cancer. The protective effect of oral contraceptive use persisted more than 10 years after pill use was discontinued.

The relative risk of endometrial cancer for women who had used combined oral contraceptives containing both an estrogen and a progestin was 0.5 (95% confidence limits 0.4-0.8). By contrast, women who had used sequential oral contraceptives (estrogen and progestin components taken at different times of the month) appeared to have an increased risk of endometrial cancer. The protective effects of combined oral contraceptives against endometrial cancer appeared to be restricted to women who had used them for 1 year or longer and was concentrated in nulliparous women.

For breast cancer, women who had used oral contraceptives had a relative risk of 0.9 (95% confidence limits 0.8-1.2) compared with women who had never used them. There was no evidence that long-term oral contraceptive use of more than 10 years or oral contraceptive use that began 16 or more years ago, shortly after oral contraceptives were introduced in this country, increased the risk of breast cancer. Furthermore, there was no indication of any increased risk of breast cancer due to oral contraceptive use for high-risk women such as those with family histories of breast cancer or with previous biopsies for benign breast disease. Similarly, there was no evidence of an increased risk of breast cancer for women who used oral contraceptives before their first pregnancy.

Reported by M Child, MD, F Vellios, MD, Emory University, Atlanta; JW Meigs, MD, WD Thompson, PhD, C White, MBBS, Yale University School of Medicine, New Haven; M Swanson, PhD, Michigan Cancer Foundation, Detroit; M Corder, MD, E Smith, PhD, University of Iowa College of Medicine, Iowa City; C Key,

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

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Oral Contraceptives—Continued

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Editorial Note: The Cancer and Steroid Hormone Study is a collaborative effort of the National Cancer institute and eight Surveillance, Epidemiology, and End Results (SEER) Centers of the Institute, the National Institute of Child Health and Human Development, and the Centers for Disease Control It is specifically designed to clarify the association between oral contraceptive use and breast, endometrial, and ovarian cancer.

Methodologic biases are unlikely to account for the study's findings. Selection bias was minimized by attempting to enroll all women from the eight geographic areas who have newly diagnosed breast, endometrial, or ovarian cancer and by selecting controls at random from the same areas. Accurate histories of oral contraceptive use were facilitated by a book containing photographs of all oral contraceptives ever marketed in the United States and by a calendar with which the women could relate periods of contraceptive use to reproductive histories and other life events (*1*). Because of the widespread use of oral contraceptives and the common occurrence of endometrial and ovarian cancer, the protective effects of oral contraceptives against these tumors could have a large public health impact. The reduced risk of cancer among women who have used oral contraceptives would result in the prevention of over 1,700 cases of ovarian cancer and over 2,000 cases of endometrial cancer in the United States each year.

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Epidemiologic Notes and Reports

Rubella in Universities — Washington, California

Seattle, Washington: Between April 4 and May 3, 1981, 12 cases of rubella were reported among students at the University of Washington in Seattle. Eight cases were serologically confirmed as rubella by a four-fold or greater rise in hemagglutination-inhibition (HI) antibody titer. The students' ages ranged from 21 to 30 years with a mean of 23 years, and six students attended the same drama class. Nine of the 12 students were female; one, who contracted rubella in her first trimester of pregnancy, chose to have an abortion. No specific control measures were instituted in this outbreak, nor was the index case ever identified. The University of Washington does not require students to prove immunity to rubella before enrollment.

Rubella—Continued

Los Angeles, California: In late November 1981, 10 cases of rubella-like illness were reported among students seen at the University of Southern California student health center. The illnesses were characterized by maculopapular rashes lasting 3-5 days, low grade fever, malaise, arthralgia, and conjunctivitis. Between November 1981 and January 20, 1982, 49 students developed a similar illness, with the peak occurring between November 15 and December 15; two cases were serologically confirmed as rubella. The students' ages ranged from 18 to 34 years with a mean of 21.5 years. Sixty-seven percent of affected students were male; 30% lived in university dormitories or apartments; and 38% were enrolled as business majors. The University of Southern California, which does not require proof of immunity to rubella, did not implement a control program.

Berkeley, California: Between December 21, 1981, and March 23, 1982, 17 cases of rash illness were reported among students at the University of California-Berkeley. Eleven of the cases were serologically confirmed as rubella. The students, who ranged in age from 20 to 34 years, had a mean age of 28.7 years. Twelve of the affected students were male. Although one student was initially hospitalized for diagnostic purposes, no nosocomial spread of rubella occurred. No pregnant students or contacts were identified. The majority of ill students resided in a cooperative residential hall (190 residents). Although rubella cases are reported routinely among students at the University of California-Berkeley, no proof of rubella immunity is required for admission.

Reported by J Altman, MD, Student Health Svc, University of Washington, D Hoyt, A Cronin, J Frederickson, C Nolan, Seattle-King County Health Dept, J Allard, PhD, State Epidemiologist, Washington State Dept of Social & Health Svcs; J Chapman, MD, Student Health Svc, University of California-Berkeley, L Dales MD, AJ Ebbin, MD, Student Health Svc, University of Southern California, L Habel MPH, B Weiss, MPH, M Strassburg MD, S Fannin, MD, Los Angeles Dept of Health Svcs, J Chin MD, State Epidemiologist, California State Dept of Health; Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: These reports demonstrate the potential for rubella outbreaks among university students. An estimated 10%-20% of persons ≥18 years of age remain susceptible (*1*). Since many students and university personnel are of child-bearing age and some may be pregnant at the time of an outbreak, rubella can pose a serious public health problem.

Although rubella immunization is required for school entrance or attendance in all states, female students ≥12 years old are exempted in many states because of the theoretical risk to a fetus associated with vaccinating pregnant women. Existing data, however, show this potential risk, to be minimal (*2*). Because of continued rubella outbreaks on campuses and exposure of pregnant students, university employees, and contacts, universities should address the issue of rubella immunity among students and staff (*3-6*). The Immunization Practices Advisory Committee (ACIP) strongly urges educational institutions to consider requiring proof of immunity (documented history of rubella vaccination on or after the first birthday or presence of antibody to rubella) for admission or employment (*2*). Both male and female students should be included in any such requirement.

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Current Trends

Serologic Diagnosis of Measles

As the countdown for measles elimination has progressed, increasing efforts have been made to confirm measles cases by laboratory methods. As an additional measles serodiagnostic test, a staphylococcal protein A (SPA) adsorption test has recently been adapted to measure measles-specific IgM (*1,2*). This test is based on the principle that SPA will bind IgG antibody and will permit its removal from a serum specimen, allowing any residual measles IgM antibody to be measured by routine hemagglutination-inhibition (HI) testing (*3*).

The sensitivity and specificity of the SPA test were assessed relative to sucrose gradient ultracentrifugation (SGU), the standard method for measuring measles-specific IgM, using 79 serum specimens from patients clinically suspected of having measles (Table 1) (*4*). The sensitivity of the SPA was 71% (45/63), and the specificity was 81% (13/16). In this study, a positive IgM detected by SPA was almost always confirmed as IgM by the SGU; of the 48 serum specimens positive by SPA, 45 (94%) were also positive by SGU. However, a negative SPA test did not mean IgM was absent; of the 31 specimens that tested negative by the SPA test, 18 (58%) were positive by SGU.

Continued on page 401

TABLE I. Summary – cases of specified notifiable diseases, United States

DISEASE		29th WEEK ENDING			CUMULATIVE, FIRST 29 WEEKS		
		July 24, 1982	July 25, 1981	MEDIAN 1977-1981	July 24, 1982	July 25, 1981	MEDIAN 1977-1981
Aseptic meningitis		222	338	184	2,734	2,853	2,028
Brucellosis		5	1	4	85	83	100
Encephalitis:	Primary (arthropod-borne & unspec.)	27	41	28	473	504	385
	Post-infectious	-	-	4	41	60	119
Gonorrhea:	Civilian	18,635	20,036	20,759	497,975	545,709	530,099
	Military	293	755	547	14,070	16,324	15,109
Hepatitis:	Type A	393	518	566	12,083	14,187	15,834
	Type B	383	412	358	11,364	11,184	9,171
	Non A, Non B	35	N	N	1,182	N	N
	Unspecified	184	197	197	5,002	6,084	5,564
Legionellosis		17	N	N	225	N	N
Leprosy		10	6	3	111	145	96
Malaria		15	28	26	513	778	376
Measles (rubeola)		61	48	150	1,071	2,399	12,256
Meningococcal infections:	Total	36	32	38	1,860	2,290	1,708
	Civilian	35	52	38	1,848	2,282	1,691
	Military	1	-	-	12	8	12
Mumps		52	40	148	3,938	2,923	10,554
Pertussis		36	27	44	606	586	692
Rubella (German measles)		21	30	98	1,811	1,567	10,222
Syphilis (Primary & Secondary):	Civilian	632	667	452	17,856	16,596	13,213
	Military	12	21	5	223	217	167
Tuberculosis		540	531	585	14,199	14,650	15,390
Tularemia		10	12	8	115	118	94
Typhoid fever		4	9	9	207	277	250
Typhus fever, tick-borne (RMSF)		64	60	60	543	709	573
Rabies, animal		119	176	120	3,486	4,295	2,694

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1982		CUM. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Wash. 1, Calif. 1)	48	Paralytic	3
Cholera	-	Psittacosis (Wash. 2)	69
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	-	Tetanus (Ala. 1)	40
Leptospirosis	31	Trichinosis	59
Plague	5	Typhus fever, flea-borne (endemic, murine) (Tex. 2)	19

N: Not notifiable

TABLE III. Cases of specified notifiable diseases, United States, weeks ending July 24, 1982 and July 25, 1981 (29th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	ENCEPHALITIS		GONORRHEA (Civilian)		HEPATITIS (Viral), by type				LEGIONELLOSIS	LEPROSY
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1982	CUM. 1981	1982	1982	1982	1982	1982	CUM. 1982
UNITED STATES	222	85	473	41	497,975	565,709	393	383	35	184	17	111
NEW ENGLAND	10	3	16	5	12,448	13,609	8	29	1	10	8	1
Maine	-	-	-	-	583	672	1	-	-	-	-	-
N.H.	1	-	-	-	355	480	-	-	-	-	1	-
Vt.	-	-	-	-	247	234	-	-	-	-	4	-
Mass.	4	-	6	-	5,805	5,607	6	11	-	7	-	-
R.I.	5	-	-	-	834	725	1	5	-	-	-	-
Conn.	-	3	10	5	4,624	5,891	-	13	1	3	3	1
MID. ATLANTIC	23	3	55	11	63,454	64,192	43	64	3	14	4	4
Upstate N.Y.	8	3	19	3	10,381	10,512	9	18	-	4	1	1
N.Y. City	-	-	11	-	26,556	26,910	1	4	-	-	-	1
N.J.	12	-	12	-	11,366	12,066	14	25	3	5	3	1
Pa.	3	-	13	8	15,151	14,704	19	17	-	5	-	1
E.N. CENTRAL	19	-	106	7	67,610	83,559	35	48	3	15	2	3
Ohio	7	-	38	4	20,520	28,369	10	19	-	5	2	-
Ind.	3	-	27	2	8,068	7,327	9	9	2	8	-	-
Ill.	-	-	7	1	14,978	22,946	2	2	1	-	-	3
Mich.	6	-	34	-	17,358	17,447	11	17	-	2	-	-
Wis.	3	-	2	-	6,686	7,470	3	1	-	-	-	-
W.N. CENTRAL	14	11	32	3	24,453	26,093	13	17	2	3	-	3
Minn.	-	-	11	1	3,676	4,224	5	4	2	2	-	1
Iowa	5	2	12	1	2,575	2,846	2	1	-	-	-	-
Mo.	-	3	4	-	11,482	11,896	5	3	-	-	-	1
N. Dak.	4	-	-	-	330	365	-	-	-	-	-	-
S. Dak.	2	1	-	1	668	717	-	-	-	-	-	1
Nebr.	1	2	2	-	1,490	1,997	-	3	-	1	-	-
Kans.	2	3	3	-	4,232	4,048	1	6	-	-	-	-
S. ATLANTIC	67	17	74	6	119,176	134,365	49	89	7	14	1	6
Del.	-	-	-	-	2,055	2,126	1	4	-	-	-	-
Md.	1	-	14	-	17,165	15,100	4	16	-	1	-	2
D.C.	2	-	-	-	7,496	8,217	1	2	-	-	-	-
Va.	8	7	19	1	10,897	12,199	2	6	1	1	-	1
W. Va.	-	-	2	-	1,491	2,039	1	1	-	-	-	-
N.C.	9	-	9	1	21,492	20,826	3	4	-	1	-	-
S.C.	-	2	-	-	13,133	13,111	3	10	-	1	-	-
Ga.	2	1	-	-	9,483	27,563	4	22	1	1	-	-
Fla.	45	7	30	4	35,964	33,104	30	24	5	9	1	3
E.S. CENTRAL	8	10	25	2	44,468	44,702	14	22	-	2	-	-
Ky.	-	-	-	-	6,082	5,716	4	1	-	-	-	-
Tenn.	3	6	14	-	17,161	17,042	7	14	-	1	-	-
Ala.	4	3	8	2	13,521	13,495	1	5	-	1	-	-
Miss.	1	1	3	-	7,704	8,449	2	2	-	-	-	-
W.S. CENTRAL	28	23	58	1	71,938	71,069	70	25	-	62	-	13
Ark.	-	4	2	-	5,857	5,270	-	1	-	5	-	-
La.	1	6	8	-	13,289	10,950	6	2	-	3	-	-
Okla.	8	3	16	-	7,964	7,702	17	8	-	3	-	-
Tex.	19	10	32	1	44,828	47,147	47	14	-	51	-	15
MOUNTAIN	5	-	18	3	17,984	21,311	53	19	2	7	1	2
Mont.	1	-	-	-	750	770	1	-	-	1	-	-
Idaho	-	-	-	-	826	895	2	-	-	-	-	1
Wyo.	-	-	-	-	524	497	-	-	-	-	-	-
Colo.	3	-	8	1	4,812	5,757	10	5	1	2	-	-
N. Mex.	-	-	-	-	2,263	2,347	16	2	-	3	-	-
Ariz.	-	-	6	-	4,870	6,481	19	10	1	1	-	-
Utah	1	-	-	2	843	995	1	1	-	-	1	1
Nev.	-	-	4	-	3,096	3,569	4	1	-	-	-	-
PACIFIC	48	18	89	3	76,444	86,809	108	70	17	57	1	77
Wash.	6	-	9	-	6,208	7,108	5	8	-	6	1	6
Oreg.	-	-	2	-	4,318	5,285	11	5	2	1	-	-
Calif.	37	17	74	3	62,661	70,620	92	57	15	49	-	49
Alaska	2	1	3	-	1,896	2,142	-	-	-	1	-	1
Hawaii	3	-	1	-	1,361	1,654	-	-	-	-	-	21
Guam	U	-	-	-	53	72	U	U	U	U	U	-
P.R.	U	-	1	-	1,579	1,821	U	U	U	U	U	-
V.I.	-	-	-	-	126	107	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	187	257	U	U	U	U	U	10

N: Not notifiable U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 24, 1982 and July 25, 1981 (29th week)

REPORTING AREA	MALARIA		MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS (Total)		MUMPS		PERTUSSIS	RUBELLA		
	1982	CUM. 1982	1982	CUM. 1982	CUM. 1981	1982	CUM. 1982	1982	CUM. 1982	1982	1982	CUM. 1982	CUM. 1981
UNITED STATES	15	513	61	1,071	2,399	36	1,860	52	3,938	36	21	1,811	1,567
NEW ENGLAND	-	26	-	9	72	2	101	2	158	3	1	16	110
Maine	-	-	-	-	5	-	6	-	34	-	-	-	33
N.H.	-	-	-	2	6	-	14	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	-	5	-	-	-	-
Mass.	-	20	-	2	51	1	26	1	77	3	1	4	22
R.I.	-	2	-	-	-	-	11	-	14	-	-	1	-
Conn.	-	4	-	3	8	1	38	1	16	-	-	3	12
MID. ATLANTIC	4	70	2	155	773	5	333	2	248	8	-	86	187
Upstate N.Y.	1	16	2	105	201	1	109	2	53	4	-	41	84
N.Y. City	-	21	-	42	66	-	58	-	41	1	-	31	47
N.J.	1	21	-	4	51	2	71	-	36	1	-	14	46
Pa.	2	12	-	4	455	2	95	-	118	2	-	-	10
E.N. CENTRAL	2	35	-	66	75	2	222	11	2,118	1	2	152	334
Ohio	-	9	-	1	15	-	83	4	1,547	-	-	-	3
Ind.	-	1	-	2	8	-	22	4	37	-	-	26	114
Ill.	-	3	-	23	23	2	62	-	165	-	-	55	81
Mich.	2	20	-	40	28	-	43	2	287	1	-	45	33
Wis.	-	2	-	-	1	-	12	1	82	-	2	26	103
W.N. CENTRAL	-	14	10	49	10	1	78	11	536	1	-	59	76
Minn.	-	2	-	-	3	1	20	10	412	-	-	9	7
Iowa	-	5	-	-	1	-	5	-	29	-	-	-	4
Mo.	-	3	-	2	1	-	23	-	15	-	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	3	-	1	1	-	1	-
Nebr.	-	3	3	3	4	-	9	-	-	-	-	-	1
Kans.	-	1	7	44	1	-	12	1	79	-	-	11	62
S. ATLANTIC	6	80	1	35	333	8	372	3	221	11	2	68	125
Del.	-	-	-	-	-	-	-	-	10	-	-	1	1
Md.	-	12	-	3	2	1	23	-	21	3	-	33	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	3	26	-	14	6	2	42	-	30	2	-	13	4
W. Va.	1	6	-	2	9	-	7	1	82	-	-	1	22
N.C.	-	2	-	-	3	1	77	1	11	-	-	1	5
S.C.	-	3	-	-	-	1	41	-	13	1	-	1	8
Ga.	-	10	-	-	108	2	81	1	11	2	1	6	35
Fla.	2	18	1	15	204	1	99	-	43	3	1	12	49
E.S. CENTRAL	-	6	-	8	2	1	123	3	35	1	-	39	25
Ky.	-	4	-	1	-	-	20	1	10	-	-	22	16
Tenn.	-	-	-	6	-	1	52	1	14	1	-	1	8
Ala.	-	-	-	-	2	-	44	-	5	-	-	-	1
Miss.	-	2	-	1	-	-	7	1	6	-	-	16	-
W.S. CENTRAL	1	35	1	15	787	5	219	5	149	4	1	98	128
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	2
La.	-	3	-	2	2	1	38	-	3	-	-	1	9
Okla.	-	5	-	-	5	2	23	-	-	-	-	3	-
Tex.	1	24	1	13	779	2	146	5	140	4	1	93	117
MOUNTAIN	-	15	-	5	32	5	91	5	66	5	1	59	76
Mont.	-	-	-	-	-	-	4	-	3	1	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	-	-	1	3
Wyo.	-	-	-	-	-	-	5	-	2	1	-	7	3
Colo.	-	8	-	5	9	3	37	-	8	3	-	4	30
N. Mex.	-	2	-	-	8	1	14	-	-	-	-	5	5
Ariz.	-	3	-	-	4	1	15	3	32	-	-	8	19
Utah	-	1	-	-	-	-	7	1	13	-	1	20	4
Nev.	-	-	-	-	10	-	3	1	5	-	-	9	9
PACIFIC	2	232	47	729	315	7	321	10	407	2	14	1,234	506
Wash.	-	11	-	31	3	1	32	-	61	1	2	34	55
Oreg.	-	9	1	8	3	-	63	-	-	-	1	6	49
Calif.	2	210	46	686	307	6	213	9	332	1	11	1,185	[illegible]
Alaska	-	-	-	1	-	-	10	-	6	-	-	1	-
Hawaii	-	2	-	3	2	-	3	1	8	-	-	8	13
Guam	U	1	U	5	6	U	2	U	3	U	U	2	1
P.R.	U	4	U	76	245	U	7	U	43	U	U	6	3
V.I.	-	-	-	-	17	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	1	U	U	-	1

U: Unavailable

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 24, 1982 and July 25, 1981 (29th week)

REPORTING AREA	SYPHILIS (Civilian) (Primary & Secondary)		TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		RABIES, Animal
	CUM. 1982	CUM. 1981	1982	CUM. 1982	CUM. 1982	1982	CUM. 1982	1982	CUM. 1982	CUM. 1982
UNITED STATES	17,856	16,596	540	14,199	115	4	207	64	543	3,486
NEW ENGLAND	307	345	20	385	2	-	14	1	6	26
Maine	1	2	1	31	-	-	-	-	-	19
N.H.	1	12	-	11	-	-	-	-	1	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	203	231	16	256	2	-	10	1	3	4
R.I.	17	19	1	17	-	-	-	-	1	-
Conn.	84	68	2	63	-	-	2	-	1	3
MID. ATLANTIC	2,457	2,491	111	2,388	7	-	33	4	20	103
Upstate N.Y.	243	232	14	401	7	-	4	1	2	51
N.Y. City	1,476	1,496	39	875	-	-	20	-	1	-
N.J.	333	340	18	486	-	-	5	-	10	6
Pa.	405	423	40	626	-	-	4	3	7	46
E.N. CENTRAL	940	1,134	75	2,169	-	1	16	10	51	396
Ohio	173	149	11	370	-	1	8	10	50	58
Ind.	105	111	11	288	-	-	-	-	-	59
Ill.	448	640	43	880	-	-	3	-	1	200
Mich.	156	182	10	518	-	-	5	-	-	4
Wis.	58	52	-	113	-	-	-	-	-	75
W.N. CENTRAL	334	335	16	423	14	1	8	4	17	775
Minn.	64	118	-	71	-	1	5	-	-	134
Iowa	20	13	1	48	1	-	1	-	3	246
Mo.	201	177	8	200	9	-	1	-	5	69
N. Dak.	4	6	-	7	-	-	-	-	-	68
S. Dak.	-	2	2	19	-	-	-	3	3	61
Nebr.	10	4	4	19	2	-	-	1	1	92
Kans.	35	15	1	59	2	-	1	-	5	105
S. ATLANTIC	4,871	4,336	92	2,890	9	-	29	34	303	600
Del.	9	7	1	25	-	-	-	-	-	2
Md.	268	323	13	333	1	-	7	6	34	33
D.C.	272	361	4	114	-	-	-	-	-	-
Va.	344	395	10	315	2	-	2	7	37	307
W. Va.	20	13	2	86	-	-	3	1	5	32
N.C.	342	335	20	467	-	-	-	17	136	37
S.C.	262	268	2	277	5	-	3	2	65	32
Ga.	1,008	1,124	15	427	-	-	-	1	24	118
Fla.	2,346	1,490	25	846	1	-	14	-	2	39
E.S. CENTRAL	1,259	1,074	55	1,320	6	-	14	9	40	411
Ky.	70	55	12	335	-	-	-	-	-	85
Tenn.	330	421	20	438	4	-	2	6	26	257
Ala.	464	303	20	375	-	-	9	1	6	69
Miss.	395	295	3	172	2	-	3	2	8	-
W.S. CENTRAL	4,660	4,045	69	1,699	58	1	21	1	96	685
Ark.	118	76	10	181	38	1	2	1	16	95
La.	979	938	13	281	3	-	2	-	-	17
Okla.	104	90	5	227	17	-	2	-	52	127
Tex.	3,459	2,941	41	1,010	-	-	15	-	28	446
MOUNTAIN	445	411	17	405	14	1	8	-	7	130
Mont.	3	9	-	25	2	-	-	-	2	51
Idaho	19	15	1	17	1	-	-	-	1	3
Wyo.	11	7	-	2	1	-	-	-	1	11
Colo.	124	137	-	50	3	-	2	-	-	17
N. Mex.	95	78	2	78	-	-	-	-	1	11
Ariz.	106	80	12	170	-	-	4	-	-	27
Utah	13	16	-	23	7	-	1	-	-	7
Nev.	74	69	2	40	-	1	1	-	2	3
PACIFIC	2,583	2,425	85	2,520	5	-	64	1	3	360
Wash.	83	94	9	155	1	-	3	-	-	-
Oreg.	66	53	1	99	-	-	1	-	-	1
Calif.	2,355	2,226	73	2,045	3	-	57	1	3	286
Alaska	8	10	-	46	1	-	1	-	-	73
Hawaii	71	42	2	175	-	-	2	-	-	-
Guam	1	-	U	4	-	U	-	U	-	-
P.R.	332	378	U	195	-	U	2	U	-	30
V.I.	15	13	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	68	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending July 24, 1982 (29th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	734	513	147	33	18	23	50
Boston, Mass.	198	122	49	12	7	8	22
Bridgeport, Conn.	57	40	10	2	4	1	1
Cambridge, Mass.	36	27	9	-	-	-	1
Fall River, Mass.	26	22	3	1	-	-	-
Hartford, Conn.	75	51	16	7	1	-	-
Lowell, Mass.	21	17	3	1	-	-	3
Lynn, Mass.	15	9	4	1	1	-	-
New Bedford, Mass.	22	18	2	1	-	1	1
New Haven, Conn.	60	34	13	4	3	6	1
Providence, R.I.	67	50	13	-	-	4	4
Somerville, Mass.	10	9	1	-	-	-	1
Springfield, Mass.	49	35	10	1	1	2	8
Waterbury, Conn.	39	29	8	2	-	-	3
Worcester, Mass.	59	50	6	1	1	1	5
MID. ATLANTIC	2,587	1,723	570	168	62	63	112
Albany, N.Y.	55	39	13	1	1	1	1
Allentown, Pa.	16	14	2	-	-	-	-
Buffalo, N.Y.	120	81	32	4	2	1	15
Camden, N.J.	38	21	11	3	-	3	-
Elizabeth, N.J.	19	12	7	-	-	-	3
Erie, Pa.†	48	36	7	2	2	1	4
Jersey City, N.J.	69	45	15	5	1	3	-
N.Y. City, N.Y.	1,513	1,011	314	119	41	28	50
Newark, N.J.	73	34	25	7	2	4	3
Paterson, N.J.	38	27	9	1	-	1	4
Philadelphia, Pa.†	113	65	27	6	1	14	5
Pittsburgh, Pa.†	87	50	25	6	3	3	4
Reading, Pa.	32	24	7	-	-	1	2
Rochester, N.Y.	124	88	25	7	4	-	8
Schenectady, N.Y.	30	21	8	1	-	-	1
Scranton, Pa.†	31	23	8	-	-	-	1
Syracuse, N.Y.	94	69	17	3	3	2	1
Trenton, N.J.	44	29	11	2	1	1	4
Utica, N.Y.	14	10	4	-	-	-	1
Yonkers, N.Y.	29	24	3	1	1	-	5
E.N. CENTRAL	2,309	1,423	551	163	83	89	58
Akron, Ohio	62	39	15	1	4	3	-
Canton, Ohio	22	17	5	-	-	-	1
Chicago, Ill.	524	312	118	47	26	21	9
Cincinnati, Ohio	173	115	37	10	5	6	11
Cleveland, Ohio	195	108	56	17	6	8	4
Columbus, Ohio	138	79	39	9	6	5	-
Dayton, Ohio	127	73	34	14	3	3	2
Detroit, Mich.	241	149	61	19	6	6	3
Evansville, Ind.	44	36	6	2	-	-	1
Fort Wayne, Ind.	53	31	14	5	1	2	2
Gary, Ind.	16	8	2	5	1	-	-
Grand Rapids, Mich.	55	36	16	2	-	1	5
Indianapolis, Ind.	185	97	47	14	11	16	-
Madison, Wis.	38	20	8	6	1	3	2
Milwaukee, Wis.	131	93	26	3	3	6	-
Peoria, Ill.	48	33	8	2	4	1	6
Rockford, Ill.	44	25	13	-	2	4	2
South Bend, Ind.	54	41	10	2	1	-	6
Toledo, Ohio	88	56	22	4	2	4	4
Youngstown, Ohio	71	55	14	1	1	-	-
W.N. CENTRAL	759	503	149	52	23	31	23
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn.	28	22	3	1	-	2	1
Kansas City, Kans.	51	23	16	8	3	1	1
Kansas City, Mo.	120	76	30	10	1	3	4
Lincoln, Nebr.	37	23	7	3	3	1	3
Minneapolis, Minn.	90	56	16	6	6	6	1
Omaha, Nebr.	81	45	25	5	4	2	4
St. Louis, Mo.	123	79	27	10	2	5	6
St. Paul, Minn.	83	61	10	5	1	6	-
Wichita, Kans.	93	67	15	4	2	5	3
S. ATLANTIC	1,147	701	278	92	28	48	32
Atlanta, Ga.	141	81	29	20	1	10	4
Baltimore, Md.	160	93	42	18	3	4	3
Charlotte, N.C.	52	31	11	4	1	5	-
Jacksonville, Fla.	93	58	24	6	4	1	2
Miami, Fla.	116	62	36	11	2	5	-
Norfolk, Va.	58	31	16	6	2	3	2
Richmond, Va.	63	43	17	-	1	2	6
Savannah, Ga.	46	33	12	-	1	-	5
St. Petersburg, Fla.	87	69	12	2	1	3	1
Tampa, Fla.	64	43	13	2	4	2	4
Washington, D.C.	211	120	53	20	5	13	4
Wilmington, Del.	56	37	13	3	3	-	1
E.S. CENTRAL	654	404	181	31	18	20	30
Birmingham, Ala.	114	73	26	8	5	2	3
Chattanooga, Tenn.	41	26	12	1	1	1	4
Knoxville, Tenn.	45	30	12	2	1	-	1
Louisville, Ky.	89	69	16	3	1	-	9
Memphis, Tenn.	110	68	29	4	5	4	5
Mobile, Ala.	100	49	39	5	4	3	1
Montgomery, Ala.	52	24	17	4	1	6	-
Nashville, Tenn.	103	65	30	4	-	4	7
W.S. CENTRAL	1,265	740	313	112	52	48	37
Austin, Tex.	70	38	25	4	2	1	2
Baton Rouge, La.	52	26	15	9	2	-	3
Corpus Christi, Tex.	55	38	10	2	3	2	3
Dallas, Tex.	185	110	46	21	2	6	1
El Paso, Tex.	41	19	11	9	-	2	2
Fort Worth, Tex.	81	53	19	4	4	1	4
Houston, Tex.	262	142	65	23	20	12	6
Little Rock, Ark.	96	58	29	2	5	2	4
New Orleans, La.	123	65	34	12	4	8	-
San Antonio, Tex.	170	107	33	17	6	7	4
Shreveport, La.	51	34	9	3	-	5	-
Tulsa, Okla.	79	50	17	6	4	2	8
MOUNTAIN	576	343	132	50	28	23	15
Albuquerque, N.Mex.	72	37	22	6	3	4	-
Colo. Springs, Colo.	29	24	4	1	-	-	1
Denver, Colo.	130	84	16	15	5	10	4
Las Vegas, Nev.	69	33	19	12	4	1	-
Ogden, Utah	15	12	1	-	2	-	2
Phoenix, Ariz.	125	71	36	5	9	4	2
Pueblo, Colo.	30	17	7	5	1	-	2
Salt Lake City, Utah	33	19	9	1	2	2	1
Tucson, Ariz.	73	46	18	5	2	2	3
PACIFIC	1,800	1,168	383	131	67	49	85
Berkeley, Calif.	18	13	3	2	-	-	-
Fresno, Calif.	65	35	16	6	5	3	3
Glendale, Calif.	26	23	2	-	1	-	1
Honolulu, Hawaii	62	37	12	9	2	2	10
Long Beach, Calif.	88	59	16	7	2	4	2
Los Angeles, Calif.	588	392	119	42	19	14	19
Oakland, Calif.	61	33	18	4	3	3	2
Pasadena, Calif.	24	20	1	-	1	2	1
Portland, Oreg.	122	82	26	4	5	5	9
Sacramento, Calif.	67	37	18	6	5	1	1
San Diego, Calif.	163	111	32	8	3	9	14
San Francisco, Calif.	159	107	39	9	2	2	3
San Jose, Calif.	153	92	36	14	8	3	9
Seattle, Wash.	124	78	27	12	6	1	2
Spokane, Wash.	47	35	7	2	3	-	7
Tacoma, Wash.	33	14	11	6	2	-	2
TOTAL	11,831††	7,518	2,704	832	379	394	442

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

TABLE 1. Comparison of staphylococcal protein A adsorption (SPA) with sucrose gradients ultracentrifugation (SGU) for measles specific IgM antibody detection

		SGU		
		Positive	**Negative**	**Total**
SPA	**Positive**	45	3	48
	Negative	18	13	31
	Total	63	16	79
	Sensitivity	45 of 63 = 71%		
	Specificity	13 of 16 = 81%		
	Predictive value positive	45 of 48 = 94%		

Serum specimens from 36 measles cases confirmed by a four-fold or greater rise in complement-fixation or HI-antibody titer were used to determine when measles IgM becomes positive by SPA. Only six of 19 (32%) specimens collected 0-4 days after rash onset were positive by SPA compared with 12 of 17 (71%) specimens collected 5-21 days following rash onset ($X^2 = 4.01$, $p = 0.045$).

Reported by Viral Exanthems and Herpes Virus Br, Div of Viral Diseases, Center for Infectious Diseases, Surveillance, Investigations, and Research Br, Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: The techniques most commonly used to confirm measles infections serologically are the HI and the complement-fixation (CF) tests (*3*). A four-fold rise in measles-specific HI or CF antibody titers between acute- and convalescent-phase serum specimens confirms measles infection. HI antibodies generally become detectable within the first several days following rash onset and peak approximately 2 weeks later (Figure 1) (*5-7*). Complement-fixation titers frequently follow the rise in HI titers, often by 1-3 days. However, there is considerable individual variation; some persons reach peak HI and CF titers within the first few days after rash onset (*5,8,9*). Measles-specific IgM antibodies may be detected shortly after rash onset and peak within 10 days after rash onset; they are usually undetectable by 30 days (*10*).

The SGU method (used most often to measure measles IgM) is cumbersome and time-consuming and requires expensive and sophisticated equipment. The SPA adsorption test, although less sensitive than SGU for detecting IgM, is simple to perform and requires the addition of only one adsorption step to the serum-treatment procedure for the measles HI assay. Laboratories that perform the HI assay should consider adding the SPA technique for IgM measurement and should establish internal quality control with known IgM positive and IgM negative specimens. A positive test is presumptive evidence of acute measles infection. The three instances in which the SPA adsorption test was positive and the SGU was negative may have been false positives. However, it is possible that the SPA adsorption test may have detected IgM not detectable by SGU. A negative SPA adsorption test, however, should not be interpreted as the absence of IgM.

The laboratory is more helpful for confirming measles cases than for ruling out measles as the cause of a rash illness. The presence of measles-specific IgM or the detection of a four-fold rise in measles HI or CF antibody titers between acute- and convalescent-phase serum specimens confirms an acute measles infection. However, IgM may not be detected, even in specimens collected when antibody should peak, and four-fold rises may go undetected, particularly if peak titers were reached before an acute-phase specimen was drawn (*11*).

Laboratory confirmation should be sought for all suspected cases of measles occurring in the United States. However, decisions to take outbreak-control measures should be made on clinical and epidemiological grounds, since laboratory confirmation may take several weeks from rash onset, and the absence of laboratory evidence for measles infection may not rule out measles.

Measles—Continued

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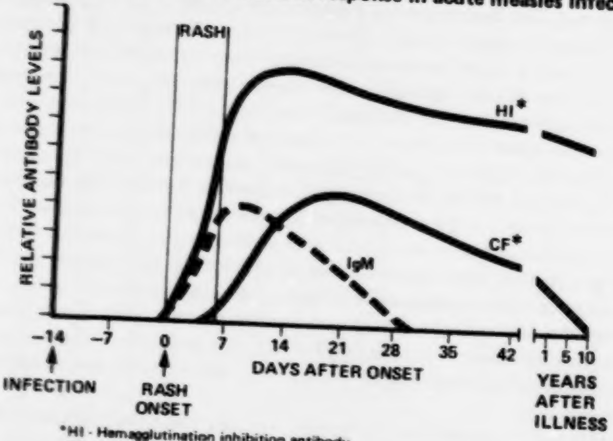
FIGURE 1. Schematic of immune response in acute measles infection



*HI - Hemagglutination inhibition antibody
CF - Complement fixation antibody

Epidemiologic Notes and Reports

Acute Bacterial Conjunctivitis — Southeastern Georgia, 1981

In September and October 1981, an outbreak of conjunctivitis involving primarily grade-school-aged children occurred in southeastern Georgia. Between September 5 and October 16, the Office of Epidemiology, Georgia Department of Human Resources, received both passive and active surveillance reports of over 2,000 conjunctivitis cases in 20 counties. Reports

Conjunctivitis–Continued

suggested that the outbreak peaked in the week ending September 19. The patients' ages ranged from 6 months to 84 years (median age = 7 years).

Between September 24 and October 4, a telephone survey of households with children in three randomly selected first grade classes (the age group most affected) was conducted in one community. Of the 72 selected households, 44 (61%) were contacted. Twenty-two of 44 (50%) reported one or more persons with conjunctivitis since September 1. Eighteen of 44 first graders (41%) had conjunctivitis. There was no difference in attack rates between males and females, blacks and whites, and residents within and beyond city limits. Symptoms reported from the index case in affected households were: conjunctival injection (86%), lid swelling (73%), watering (73%), purulent drainage (73%), eye pain (60%), itching (55%), headache (36%), and discomfort on exposure to bright light (32%). Fever, as well as respiratory and gastrointestinal symptoms were present in < 10% of cases. Thirty-eight percent of cases involved one eye; 62% were bilateral. The median duration of illness was 6.5 days (range 2 days-2-1/2 weeks). In nine of the 22 case households (41%), more than one person was affected. In three households, multiple cases appeared simultaneously. In households with multiple cases, age-specific attack rates were: ≤4 years, four of five (80%); 5-9 years, 29 of 35 (83%); 10-14, six of 14 (43%); 15-19, zero of nine; 20-29, one of 11 (9%); ≥30, zero of 31.

Microscopic examination of purulent material obtained from the eyes of eight acutely ill children in one community revealed small, pleomorphic intracellular gram-negative rods morphologically compatible with the presence of *Haemophilus* organisms. A possible *Haemophilus* species was isolated from seven of the eight specimens but could not be further identified. A similar organism was isolated from 17 persons with conjunctivitis in another community. Viral cultures from nine patients were negative.

Health authorities considered the possibility that gnats (*Hippelates pusio*) were responsible for mechanical transmission of this disease. These insects derive nourishment from eye secretions and were unusually prevalent during the outbreak period. Attempts to isolate *Haemophilis* from gnats trapped in a first-grade classroom were unsuccessful.

Reported by R Poblete, MD, Baxley, DC Schwekendiek, Tift General Hospital, Tifton, I Eunice, RN, C Matthews, JT Holloway, MD, Health District 9, Unit 2, Waycross, J Franklin, Bacteriology Laboratory, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human Resources, Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: Outbreaks of seasonal conjunctivitis in the southern states and southern California were described as early as 1929 (*1-5*); they occurred during the summer or early fall and primarily affected young children. The etiologic agent was *Haemophilus aegyptius* (known as the Kochs-Weeks bacillus and now as *H. influenza* biotype III), and mechanical vector transmission by gnats has long been suggested. In many areas of the southern United States, these insects are prevalent during the warm months. Gnat-borne transmission has been documented in animal studies (*6*).

The Morbidity and Mortality Weekly Report, circulation 111,113, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Conjunctivitis—Continued

In this outbreak, transmission by gnats was suggested. It was hypothesized that such transmission may have been facilitated when children congregated in school yards. It was not possible, however, to discern the relative importance of vector or direct person-to-person spread.

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As of October 1, 1982, the *Morbidity and Mortality Weekly Report* (MMWR) and the *Annual Summary* will continue to be provided without charge to specific groups including, among others, State Health Officials, Deans of Schools of Public Health, and disseminators of public health information. These groups and individuals will be specifically notified during the next few weeks. As of that same date, these publications will become available to others on a paid subscription basis. Details of how to obtain the MMWR and the subscription price will be announced in subsequent issues of the MMWR.

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Epidemiologic Notes and Reports

Community Outbreak of Norwalk Gastroenteritis — Georgia

An outbreak of gastroenteritis caused by the Norwalk virus recently occurred in Tate, a rural community in north Georgia. An investigation implicated the community water system as the source of infection.

On January 2-3, 1982, Tate received approximately 4.5 inches of rainfall. On January 4, residents in homes served by the municipal water system noted their tap water appeared turbid. That evening, residents reported the first cases of gastrointestinal illness. A subsequent investigation by the Office of Epidemiology, Georgia Department of Human Resources, and the Environmental Protection Division, Georgia Department of Natural Resources, included interviews of affected persons, a community telephone survey, testing of serum and stool samples from patients, and evaluation of the water system. Twenty-seven typically-ill patients identified by local physicians were interviewed. Illness was generally mild and was characterized by abrupt onset of nausea, abdominal cramps, diarrhea and/or vomiting, headache, myalgias, and low-grade fever. Duration of illness for most persons ranged from 1 to 3 days.

Fifty-seven households, systematically selected from a local directory, were surveyed by telephone. An adult member of each household provided the following information: age and sex of each household member and the household's water source, as well as information on the occurrence of gastrointestinal illness. Cases of gastrointestinal illness (defined as vomiting or diarrhea in the period January 1-9) were reported for 59/193 (30.6%) persons in the 57 households. However, 48/76 (63.2%) persons living in 25 households served by the municipal water supply were ill, as compared with 11/117 (9.4%) persons living in 32 households served by wells and other water sources ($p<0.001$) (Figure 1). Attack rates did not vary among persons in different age groups. One or more cases of illness occurred in 20/25 (80.0%) households served by the municipal water supply, as compared with 5/32 (15.6%) households served by other sources ($p<0.001$). Based on an estimated 800 persons served by the water system, approximately 500 people may have been ill during the outbreak.

Stool cultures obtained from three acutely ill patients were negative for bacterial pathogens. Paired serum specimens obtained from 22 patients were tested by radioimmunoassay (RIA) for antibody to the Norwalk virus; a $\geq$4-fold rise in antibody titer was found for 20 (90.9%) persons. Virus particles were not detected by electron microscopic examination of the three stool specimens.

The municipal water system, constructed in 1920, was using water from four sources at the time of the outbreak—one well and three springs. The well casing was below ground level and had been flooded during the heavy rains. One of the springs was located inside a fenced hog lot behind several houses with septic tanks; moreover, the spring was unprotected. Testing of a water specimen collected on January 8 from this spring revealed a fecal coliform count of >16

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Gastroenteritis – Continued

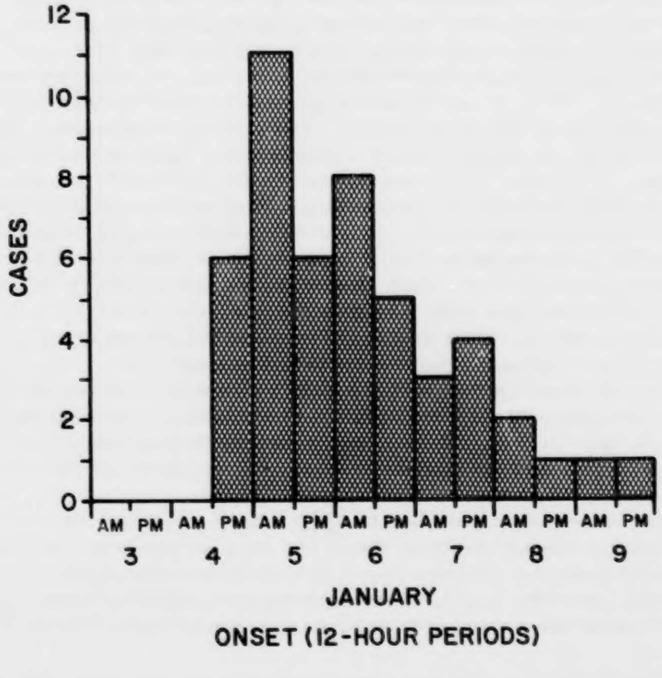
MPN/100 ml. Tap water from a church, one of five sites sampled on January 8, had an elevated fecal coliform count (5.1 MPN/100 ml) and undetectable residual free chlorine. However, fecal coliforms were not detected at four sites, where residual free chlorine levels ranged from 0.3 to 10.0 mg/L. RIA testing of serum specimens obtained from three pigs that had access to the contaminated spring did not detect antibody to Norwalk virus.

On January 7, 1982, use of the Tate water sources was discontinued, and water entering the distribution system was superchlorinated. Later that day, the system was flushed with water from the nearby community, which has since served as Tate's water source. For a limited time, Tate residents were advised to boil drinking water. There are no plans to reutilize the Tate water sources until the observed deficiencies are corrected.

Reported by TC Boswell, MD, DT Darnell, MD, Tate, JL Ledbetter, Georgia Dept of Natural Resources, J Benson, MD, TW McKinley, MPH, JD Smith, BS, RK Sikes, DVM, MPH, State Epidemiologist, Georgia Dept of Human Resources; HB Greenberg, MD, NIAID, NIH; Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: The findings of this investigation strongly implicated the Tate water system as the source for Norwalk virus infection. Fecal contamination of tap water sampled on Friday, January 8, was observed at one of five sites tested, a church, where weekday water use was infrequent. Although data concerning water consumption by residents were not obtained, household residents served by the Tate system probably became infected after drinking water contaminated with Norwalk virus. Inspection of the four water sources for the system revealed

FIGURE 1. Gastrointestinal illness associated with a municipal water supply, Tate, Georgia, January 1982



Gastroenteritis – Continued

two possible sites of contamination, including the spring in which fecal coliforms were detected. That spring was subject to contamination for several reasons: the cover was damaged, and the spring was open to ground-water runoff from nearby homes with septic tanks and penned animals and to the excreta of pigs that had direct access to the spring. In addition, the casing of the single well was recessed below ground level and had been exposed to flooding by surface water during the unusually heavy rainfall. The possibility cannot be dismissed that inadequate chlorination of the water system contributed to the outbreak.

A variety of etiologic agents have been implicated in water-related disease outbreaks, including bacterial, viral, and parasitic pathogens and chemical toxins (*1*). The clinical and epidemiologic features of this outbreak were characteristic of Norwalk infection and resembled patterns observed in previous waterborne Norwalk-associated outbreaks involving general population groups (*2-5*). This episode illustrates the importance of promptly reporting and investigating community outbreaks of gastroenteritis. A prompt response to this outbreak made possible identification of the causative agent and implementation of measures designed to prevent future outbreaks of waterborne illness in this community.

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International Notes

Dengue Type 2 Virus in East Africa

In the past year, the Virus Research Centre, Nairobi, Kenya, has received convalescent-phase serum samples from travelers or workers who became ill with dengue-like disease while working or visiting several areas in Somalia. More recently, acute- or convalescent-phase serum samples have been received from patients who lived near or visited the Kenya coast. Some of the sera reacted against the antigen of dengue type 2 by indirect fluorescence, but because of the serological overlapping within the flavivirus family, diagnosis could not be certain. Since the end of March 1982, 15 acute-phase serum samples have been obtained from people who developed signs of illness, and both cell lines developed slight cytopathic changes; after samples). Serum was inoculated into 1-day-old mice, LLC MK_2, and vero cell cultures. Mice developed signs of illness, and both cell lines developed slight cyopathic changes; after passaging, three virus strains were recovered: one from a tourist who visited Malindi, Kenya, in March and became ill upon returning to Nairobi, one from a Malindi resident who was hospitalized in late May, and one from a European who became ill while working in Mogadisho, Somalia, and returned to Nairobi on May 24.

Dengue — Continued

Indirect immunofluorescence on acetone fixed infected LLC MK_2 cells using NIH arbovirus grouping fluids were positive for NIH Group B (flaviviruses) and dengue 1, 2, 3, and 4 immune mouse ascitic fluids. Using dengue type-specific hybridoma-derived monoclonal antibodies, fluorescence was seen only with monoclonal antibody against dengue type 2. After the initial isolate was identified, subsequent isolates were made by testing with the dengue monoclonal antibodies directly after acetone fixation.

Outbreaks of dengue-like disease have occurred several times in East Africa, but when viral agents have been isolated, they have been unrelated to the four dengue serotypes. Chikungunya virus was implicated in an outbreak of febrile illness in Tanganyika in the 1950s, and a closely related alphavirus, o'nyong-nyong virus, was responsible for a large epidemic that swept through eastern Africa between 1959 and 1963. Dengue virus antibodies have been detected in human serum in East Africa, but cross-reactivity within the flaviviruses makes implicating specific virus serotypes difficult. The recent rate of dengue virus isolation, considering the small number of acute samples (three positive of 15 tested), suggests considerable virus activity in East Africa. No striking increase in the number of febrile cases seen at coastal hospitals has been noted, but the number of cases diagnosed as "clinical malaria" appears to be higher this year than previously, possibly due to increased mosquito populations caused by exceptionally heavy rainfall in 1982. A proportion of these fever cases are likely to be dengue infections.

(Continued on page 413)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	30th Week Ending			Cumulative, First 30 Weeks		
	July 31, 1982	August 1, 1981	Median 1977-1981	July 31, 1982	August 1, 1981	Median 1977-1981
Aseptic meningitis	244	348	190	2,976	3,201	2,246
Brucellosis	4	3	3	89	85	105
Encephalitis: Primary (arthropod-borne & unspec.)	29	40	28	500	542	409
Post-infectious	2	1	6	44	61	126
Gonorrhea: Civilian	19,006	21,342	21,342	517,751	567,051	551,768
Military	387	443	494	14,457	16,767	15,560
Hepatitis: Type A	378	483	552	12,459	14,666	16,384
Type B	402	438	330	11,761	11,618	9,480
Non A, Non B	37	N	N	1,218	N	N
Unspecified	167	211	179	5,167	8,286	5,740
Legionellosis	5	N	N	230	N	N
Leprosy	4	10	3	115	155	99
Malaria	28	55	22	542	833	398
Measles (rubeola)	23	48	178	1,090	2,445	12,434
Meningococcal infections: Total	40	40	40	1,898	2,328	1,755
Civilian	40	40	40	1,884	2,320	1,743
Military	-	-	-	12	8	12
Mumps	36	41	63	3,972	2,964	10,616
Pertussis	41	35	50	648	621	734
Rubella (German measles)	24	38	87	1,837	1,605	10,309
Syphilis (Primary & Secondary): Civilian	712	557	510	18,565	17,153	13,661
Military	18	10	9	241	227	176
Tuberculosis	492	654	577	14,694	15,304	15,899
Tularemia	9	7	7	125	125	101
Typhoid fever	11	6	10	218	283	260
Typhus fever, tick-borne (RMSF)	54	60	59	598	769	632
Rabies, animal	107	122	96	3,595	4,417	2,790

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Colo. 1)	49	Paralytic	3
Cholera	-	Psittacosis (Tex. 1, Upst. N.Y. 2)	76
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	-	Tetanus (Ky. 1)	42
Leptospirosis (Ark. 1, Fla. 1)	33	Trichinosis	59
Plague	5	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	20

TABLE III. Cases of specified notifiable diseases, United States, weeks ending July 31, 1982 and August 1, 1981 (30th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	244	89	500	44	517,751	567,051	378	402	37	167	5	115
NEW ENGLAND	22	3	16	5	12,808	14,056	11	14	-	14	-	1
Maine	-	-	-	-	613	703	5	1	-	-	-	-
N.H.	7	-	-	-	360	502	-	1	-	-	-	-
Vt.	1	-	-	-	250	237	2	-	-	-	-	-
Mass.	7	-	6	-	5,956	5,818	3	8	-	14	-	-
R.I.	4	-	-	-	858	736	-	-	-	-	-	-
Conn.	3	3	10	5	4,771	6,060	1	4	-	-	-	1
MID. ATLANTIC	7	3	57	11	65,898	66,553	57	60	3	6	-	4
Upstate N.Y.	3	3	21	3	10,790	10,981	22	14	-	2	-	1
N.Y. City	-	-	11	-	27,734	27,860	25	8	-	-	-	1
N.J.	-	-	12	-	11,841	12,572	10	38	3	4	-	1
Pa.	4	-	13	8	15,533	15,160	-	-	-	-	-	1
E.N. CENTRAL	26	-	111	10	70,708	86,205	43	52	-	11	4	3
Ohio	4	-	36	4	21,283	28,721	16	20	-	8	2	-
Ind.	7	-	28	3	9,135	7,584	4	1	-	1	-	-
Ill.	-	-	7	1	15,341	23,921	13	7	-	-	-	3
Mich.	12	-	37	-	18,008	18,230	8	24	-	2	1	-
Wis.	3	-	3	2	6,941	7,749	2	-	-	-	1	-
W.N. CENTRAL	17	13	35	3	25,516	26,855	11	4	-	5	-	3
Minn.	5	-	11	1	3,860	4,293	3	2	-	-	-	1
Iowa	3	3	15	1	2,673	2,969	1	-	-	-	-	-
Mo.	1	4	4	-	12,050	12,235	2	2	-	4	-	1
N. Dak.	1	-	-	-	342	375	-	-	-	-	-	-
S. Dak.	-	1	-	1	682	738	-	-	-	-	-	1
Nebr.	-	2	2	-	1,541	2,062	2	-	-	-	-	-
Kans.	7	3	3	-	4,388	4,183	3	-	-	1	-	-
S. ATLANTIC	64	18	83	6	123,453	139,550	46	113	13	28	1	6
Del.	-	-	-	-	2,185	2,206	1	-	-	1	-	-
Md.	2	-	14	-	17,726	15,617	1	15	1	4	-	2
D.C.	-	-	-	-	7,737	8,476	-	4	-	-	-	-
Va.	9	7	19	1	11,427	12,802	2	16	5	2	1	1
W. Va.	-	-	2	-	1,569	2,130	-	2	-	-	-	-
N.C.	5	-	9	1	22,382	21,620	2	10	-	2	-	-
S.C.	1	2	-	-	13,678	13,417	6	18	3	9	-	-
Ga.	-	1	1	-	9,483	28,958	5	15	1	-	-	-
Fla.	47	8	38	4	37,266	34,324	29	33	3	10	-	3
E.S. CENTRAL	17	10	28	2	46,067	46,164	17	28	2	3	-	-
Ky.	-	-	-	-	6,176	5,978	7	11	-	1	-	-
Tenn.	1	6	14	-	17,909	17,682	4	9	1	2	-	-
Ala.	15	3	11	2	13,973	13,495	3	7	1	-	-	-
Miss.	1	1	3	-	8,009	9,009	3	1	-	-	-	-
W.S. CENTRAL	35	23	58	1	75,558	75,367	82	54	3	65	-	17
Ark.	-	4	3	-	6,084	5,510	2	6	2	6	-	-
La.	11	6	8	-	14,043	12,789	33	12	-	3	-	-
Okla.	5	3	15	-	8,246	7,947	18	12	1	5	-	-
Tex.	19	10	32	1	47,205	49,121	29	24	-	51	-	17
MOUNTAIN	6	-	18	3	18,453	22,153	33	10	1	6	-	2
Mont.	-	-	-	-	767	805	-	1	-	-	-	-
Idaho	3	-	-	-	873	935	-	-	1	-	-	1
Wyo.	-	-	-	-	540	515	-	-	-	-	-	-
Colo.	2	-	8	1	4,962	5,994	8	3	-	3	-	-
N. Mex.	1	-	-	-	2,343	2,414	21	2	-	-	-	-
Ariz.	U	-	6	-	4,870	6,740	U	U	U	U	U	-
Utah	-	-	-	2	869	1,045	2	3	-	3	-	1
Nev.	-	-	4	-	3,229	3,705	2	1	-	-	-	-
PACIFIC	50	19	94	3	79,290	90,148	78	67	15	29	-	79
Wash.	6	-	9	-	6,440	7,358	7	3	1	2	-	7
Oreg.	-	-	2	-	4,403	5,392	4	7	1	1	-	-
Calif.	37	18	79	3	65,082	73,441	65	53	13	26	-	50
Alaska	1	1	3	-	1,946	2,235	-	2	-	-	-	1
Hawaii	6	-	1	-	1,419	1,722	2	2	-	-	-	21
Guam	U	-	-	-	64	72	U	U	U	U	U	-
P.R.	1	-	1	-	1,722	1,863	8	5	-	7	-	-
V.I.	-	-	-	-	132	109	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	187	267	U	U	U	U	U	10

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 31, 1982 and August 1, 1981 (30th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum 1982	1982	Cum 1982	Cum 1981	1982	Cum 1982	1982	Cum 1982	1982	1982	Cum 1982	Cum 1981
UNITED STATES	28	542	23	1,090	2,445	40	1,896	36	3,972	41	24	1,837	1,605
NEW ENGLAND	1	27	-	9	75	2	103	2	160	-	-	16	111
Maine	-	-	-	-	5	-	6	1	35	-	-	-	33
N.H.	-	-	-	2	6	-	14	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	1	6	-	-	-	-
Mass.	1	21	-	2	54	1	27	-	77	-	-	4	23
R.I.	-	2	-	-	-	-	11	-	14	-	-	1	-
Conn.	-	4	-	3	8	1	39	-	16	-	-	3	12
MID. ATLANTIC	1	71	-	151	791	5	335	3	251	8	2	88	193
Upstate N.Y.		16	-	105	203	4	113	1	54	2	2	43	89
N.Y. City	-	21	-	38	68	-	58	1	42	-	-	31	48
N.J.	1	22	-	4	52	-	71	-	36	1	-	14	46
Pa.	-	12	-	4	468	1	93	1	119	5	-	-	10
E.N. CENTRAL	-	36	-	66	75	5	227	11	2,128	7	1	153	341
Ohio	-	9	-	1	15	3	86	5	1,552	5	-	-	3
Ind.	-	1	-	2	8	-	22	-	36	-	-	26	118
Ill.	-	4	-	23	23	-	62	2	167	1	-	55	81
Mich.	-	20	-	40	28	2	45	3	290	1	1	46	33
Wis.	-	2	-	-	1	-	12	1	83	-	-	26	106
W.N. CENTRAL	1	15	-	49	10	5	83	-	536	2	-	59	76
Minn.	-	2	-	-	3	-	20	-	412	-	-	9	7
Iowa	-	5	-	-	1	-	5	-	29	-	-	-	4
Mo.	1	4	-	2	1	2	25	-	15	2	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	9	-	-	-	-	-	1
Kans.	-	1	-	44	1	2	14	-	79	-	-	11	62
S. ATLANTIC	4	84	-	35	336	4	375	2	222	13	-	68	125
Del.	1	1	-	-	-	-	-	-	10	-	-	1	1
Md.	-	12	-	3	2	-	23	1	22	-	-	33	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	-	26	-	14	6	-	42	1	31	1	-	13	4
W. Va.	-	6	-	2	9	-	7	-	81	-	-	1	22
N.C.	1	3	-	-	3	-	76	-	11	2	-	1	5
S.C.	1	4	-	-	-	1	42	-	13	-	-	1	8
Ga.	-	10	-	-	108	-	81	-	11	7	-	6	35
Fla.	1	19	-	15	207	3	102	-	43	3	-	12	49
E.S. CENTRAL	-	6	-	8	5	-	123	2	37	-	1	40	26
Ky.	-	4	-	1	1	-	20	2	12	-	-	22	17
Tenn.	-	-	-	6	2	-	52	-	14	-	1	2	8
Ala.	-	-	-	-	2	-	44	-	5	-	-	-	1
Miss.	-	2	-	1	-	-	7	-	6	-	-	16	-
W.S. CENTRAL	7	42	-	15	788	7	226	6	155	5	-	98	135
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	3
La.	-	3	-	2	2	4	42	2	5	3	-	1	9
Okla.	1	6	-	-	5	1	24	-	-	-	-	3	-
Tex.	6	30	-	13	780	2	148	4	144	2	-	93	123
MOUNTAIN	-	15	-	5	32	1	92	-	66	1	2	63	76
Mont.	-	-	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	1	-	3	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	3
Colo.	-	8	-	5	9	1	38	-	8	-	1	5	30
N. Mex.	-	2	-	-	8	-	14	-	-	-	-	5	5
Ariz.	U	3	U	-	4	U	15	U	32	U	U	8	19
Utah	-	1	-	-	-	-	7	-	13	-	-	20	4
Nev.	-	-	-	-	10	-	3	-	5	-	1	10	9
PACIFIC	14	246	23	752	323	11	332	10	417	5	18	1,252	522
Wash.	1	12	-	31	3	3	35	-	61	1	1	35	55
Oreg.	-	9	-	8	3	2	65	-	-	-	-	6	49
Calif.	13	223	23	709	315	6	219	10	342	4	17	1,202	405
Alaska	-	-	-	1	-	-	10	-	6	-	-	1	-
Hawaii	-	2	-	3	2	-	3	-	8	-	-	8	13
Guam	U	1	U	5	6	U	2	U	3	U	U	2	1
P.R.	-	4	1	81	247	-	8	-	46	-	1	7	3
V.I.	-	-	-	-	22	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	1	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 31,1982 and August 1, 1981 (30th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	18,565	17,153	492	14,694	125	11	218	54	596	3,595
NEW ENGLAND	314	354	8	393	2	-	14	-	6	27
Maine	1	2	1	32	-	-	-	-	-	20
N.H.	1	12	-	11	-	-	-	-	1	-
Vt.	1	13	-	7	-	-	2	-	-	-
Mass.	210	238	7	263	2	-	10	-	3	4
R.I.	17	21	-	17	-	-	-	-	1	-
Conn.	84	68	-	63	-	-	2	-	1	3
MID. ATLANTIC	2,554	2,578	71	2,459	7	1	34	5	24	106
Upstate N.Y.	255	241	21	422	7	1	5	5	7	53
N.Y. City	1,534	1,545	20	895	-	-	20	-	1	-
N.J.	346	350	10	496	-	-	5	-	10	6
Pa.	419	442	20	646	-	-	4	-	6	47
E.N. CENTRAL	962	1,160	95	2,262	1	-	16	6	58	408
Ohio	182	149	20	390	-	-	8	6	56	59
Ind.	116	112	11	299	-	-	-	-	-	62
Ill.	448	657	46	926	-	-	3	-	2	205
Mich.	158	186	14	530	-	-	5	-	-	4
Wis.	58	56	4	117	1	-	-	-	-	78
W.N. CENTRAL	340	343	6	428	15	-	8	-	17	798
Minn.	65	118	-	71	-	-	5	-	-	134
Iowa	18	14	-	48	1	-	1	-	3	254
Mo.	207	184	5	204	10	-	1	-	5	73
N. Dak.	4	6	1	8	-	-	-	-	-	71
S. Dak.	-	2	-	19	-	-	-	-	3	61
Nebr.	11	4	-	19	2	-	-	-	1	98
Kans.	35	15	-	59	2	-	1	-	5	107
S. ATLANTIC	5,054	4,501	103	2,992	9	5	34	31	334	623
Del.	9	7	-	25	-	-	-	-	-	2
Md.	277	343	15	348	1	2	9	-	34	33
D.C.	279	363	-	114	-	-	-	-	-	-
Va.	355	412	U	315	2	1	3	8	45	317
W. Va.	20	15	2	88	-	-	3	1	6	32
N.C.	365	343	27	493	-	-	-	14	150	41
S.C.	278	300	4	281	5	-	3	8	73	34
Ga.	1,041	1,160	30	457	-	-	-	-	24	123
Fla.	2,430	1,558	25	871	1	2	16	-	2	41
E.S. CENTRAL	1,293	1,116	32	1,351	6	-	14	4	44	423
Ky.	72	60	10	344	-	-	-	-	-	85
Tenn.	346	425	12	450	4	-	2	3	29	265
Ala.	476	303	10	385	-	-	9	-	6	72
Miss.	399	328	-	172	2	-	3	1	9	1
W.S. CENTRAL	4,868	4,159	90	1,789	64	1	22	7	102	705
Ark.	121	79	7	188	40	-	2	1	17	99
La.	1,076	982	5	286	3	1	3	-	-	21
Okla.	109	98	7	234	20	-	2	4	55	132
Tex.	3,562	3,000	71	1,081	1	-	15	2	30	453
MOUNTAIN	476	459	10	415	15	-	8	1	8	136
Mont.	3	11	-	25	2	-	-	-	2	54
Idaho	22	15	2	19	1	-	-	-	1	5
Wyo.	11	7	-	2	1	-	-	-	1	11
Colo.	131	142	2	52	3	-	2	1	1	19
N. Mex.	114	87	6	84	1	-	-	-	1	11
Ariz.	106	105	U	170	-	U	4	U	-	27
Utah	13	16	-	23	7	-	1	-	-	6
Nev.	76	76	-	40	-	-	1	-	2	3
PACIFIC	2,704	2,483	77	2,605	6	4	68	-	3	369
Wash.	83	94	7	170	1	-	3	-	-	-
Oreg.	68	54	9	108	-	-	1	-	-	1
Calif.	2,472	2,282	57	2,102	4	4	61	-	3	295
Alaska	8	10	-	46	1	-	1	-	-	73
Hawaii	73	43	4	179	-	-	2	-	-	-
Guam	1	-	U	7	-	U	-	U	-	-
P.R.	369	388	-	195	-	-	2	-	-	31
V.I.	17	13	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	68	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,[*] week ending July 31, 1982 (30th week)

Reporting Area	All Causes, By Age (Years)						P&I[**] Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	604	415	120	39	15	14	38
Boston, Mass	175	104	39	19	6	7	15
Bridgeport, Conn	47	31	12	2	-	2	2
Cambridge, Mass	23	18	4	1	-	-	1
Fall River, Mass	23	13	4	4	1	-	-
Hartford, Conn	41	31	8	-	2	-	-
Lowell, Mass	25	17	8	-	-	-	1
Lynn, Mass	23	19	2	2	-	-	1
New Bedford, Mass	31	26	4	1	-	-	1
New Haven, Conn	47	35	7	3	1	1	-
Providence, R.I.	62	47	9	3	1	2	3
Somerville, Mass	6	5	1	-	-	-	1
Springfield, Mass	28	19	5	1	1	2	5
Waterbury, Conn	33	19	10	2	2	-	4
Worcester, Mass	40	31	7	1	1	-	2
MID ATLANTIC	2,345	1,628	598	173	73	75	86
Albany, N.Y.	47	30	8	1	1	7	1
Allentown, Pa	17	13	4	-	-	-	1
Buffalo, N.Y.	135	88	30	9	4	4	6
Camden, N.J.	42	35	3	1	2	1	-
Elizabeth, N.J.	34	23	11	-	-	-	2
Erie, Pa[†]	43	30	8	2	2	1	3
Jersey City, N.J.	40	23	12	3	1	1	-
N.Y. City, N.Y.	1,425	907	320	113	46	39	34
Newark, N.J.	69	20	29	8	6	6	8
Paterson, N.J.	30	20	5	-	1	4	3
Philadelphia, Pa[†]	242	140	71	22	3	6	10
Pittsburgh, Pa[†]	76	56	18	-	-	2	1
Reading, Pa	33	21	10	2	-	-	-
Rochester, N.Y.	105	77	18	5	3	2	8
Schenectady, N.Y.	32	17	11	2	2	-	2
Scranton, Pa[†]	16	13	3	-	-	-	-
Syracuse, N.Y.	83	56	21	4	1	1	2
Trenton, N.J.	20	14	5	-	1	-	-
Utica, N.Y.	26	20	5	-	-	1	3
Yonkers, N.Y.	30	23	6	1	-	-	2
E.N. CENTRAL	2,219	1,421	503	143	73	79	59
Akron, Ohio	93	61	18	8	3	3	2
Canton, Ohio	47	31	12	2	2	-	2
Chicago, Ill	491	288	120	45	16	22	15
Cincinnati, Ohio	150	97	37	4	7	5	11
Cleveland, Ohio	148	85	43	12	4	4	1
Columbus, Ohio	142	93	32	12	2	3	-
Dayton, Ohio	87	50	19	4	7	7	-
Detroit, Mich	261	154	67	23	8	9	8
Evansville, Ind	57	38	14	2	2	1	2
Fort Wayne, Ind	65	42	17	2	3	1	3
Gary, Ind	13	7	3	1	2	-	-
Grand Rapids, Mich	56	42	8	1	1	4	1
Indianapolis, Ind	164	94	46	9	5	10	4
Madison, Wis	37	22	10	1	3	1	1
Milwaukee, Wis	123	92	24	5	2	-	1
Peoria, Ill	37	22	6	2	4	3	2
Rockford, Ill	45	34	4	3	1	3	2
South Bend, Ind	46	35	9	2	-	-	2
Toledo, Ohio [§]	89	84	1	1	1	2	2
Youngstown, Ohio	68	50	13	4	-	1	-
W.N. CENTRAL	705	485	140	29	30	40	31
Des Moines, Iowa [§]	53	51	-	-	1	-	-
Duluth, Minn	22	14	5	-	2	1	2
Kansas City, Kans	38	26	8	1	1	2	1
Kansas City, Mo	127	82	30	5	7	3	4
Lincoln, Nebr	33	25	5	2	1	-	1
Minneapolis, Minn	83	45	20	11	6	1	2
Omaha, Nebr	73	45	22	-	2	4	8
St. Louis, Mo	160	96	28	6	4	26	3
St. Paul, Minn	66	43	15	2	3	3	2
Wichita, Kans	50	38	7	2	3	-	8
S. ATLANTIC	1,081	662	266	82	31	37	59
Atlanta, Ga	135	80	41	12	1	1	1
Baltimore, Md	183	115	44	17	5	2	9
Charlotte, N.C.	82	53	15	4	4	3	9
Jacksonville, Fla	96	56	24	8	5	3	2
Miami, Fla	91	53	24	9	-	5	4
Norfolk, Va	54	25	17	6	2	4	4
Richmond, Va	76	50	17	3	2	4	5
Savannah, Ga	38	25	9	1	-	3	3
St. Petersburg, Fla	83	72	9	-	1	1	8
Tampa, Fla	67	38	16	4	4	5	2
Washington, D.C.	127	69	40	10	6	2	6
Wilmington, Del	49	28	10	8	1	4	6
E.S. CENTRAL	668	404	171	45	29	19	25
Birmingham, Ala	104	64	27	8	3	2	-
Chattanooga, Tenn	53	37	6	5	4	1	5
Knoxville, Tenn	52	40	9	-	3	-	1
Louisville, Ky	87	49	33	2	-	3	2
Memphis, Tenn	174	106	44	13	4	7	8
Mobile, Ala	45	29	6	3	7	-	2
Montgomery, Ala	49	27	13	6	3	-	1
Nashville, Tenn	104	52	33	8	5	6	6
W.S. CENTRAL	1,354	731	345	129	81	68	37
Austin, Tex	55	30	16	6	3	-	-
Baton Rouge, La	35	19	9	7	-	-	1
Corpus Christi, Tex	47	28	10	6	2	1	-
Dallas, Tex	194	105	57	11	9	12	1
El Paso, Tex	66	30	19	7	6	4	2
Fort Worth, Tex	81	46	14	11	1	9	2
Houston, Tex	366	177	103	41	30	15	11
Little Rock, Ark	75	48	20	3	1	3	7
New Orleans, La	126	61	33	12	6	14	-
San Antonio, Tex	158	90	32	13	16	7	5
Shreveport, La	60	43	10	5	2	-	2
Tulsa, Okla	91	54	22	7	5	3	6
MOUNTAIN	633	358	139	51	53	32	22
Albuquerque, N.Mex	103	37	15	24	23	4	3
Colo. Springs, Colo	39	26	8	-	3	2	5
Denver, Colo	113	64	30	6	6	7	2
Las Vegas, Nev	79	38	23	7	7	4	1
Ogden, Utah	35	21	7	2	2	3	2
Phoenix, Ariz	128	82	31	4	4	7	2
Pueblo, Colo	23	17	3	1	2	-	2
Salt Lake City, Utah	45	26	8	4	5	2	2
Tucson, Ariz	68	47	14	3	1	3	3
PACIFIC	1,791	1,165	370	132	63	61	89
Berkeley, Calif	23	15	4	4	-	-	1
Fresno, Calif	83	49	21	3	3	7	6
Glendale, Calif	38	31	5	1	-	1	1
Honolulu, Hawaii	62	40	15	1	5	1	8
Long Beach, Calif	94	62	24	5	1	2	3
Los Angeles, Calif	583	378	112	48	26	19	20
Oakland, Calif	54	36	11	3	2	2	1
Pasadena, Calif	36	26	5	3	1	1	5
Portland, Oreg	119	78	27	8	3	3	5
Sacramento, Calif	71	45	17	4	2	3	7
San Diego, Calif	124	62	36	14	5	7	13
San Francisco, Calif	135	93	21	16	3	2	2
San Jose, Calif	145	91	32	9	7	6	12
Seattle, Wash	137	96	26	8	4	3	3
Spokane, Wash	51	37	9	2	-	3	2
Tacoma, Wash	36	26	5	3	1	1	-
TOTAL	11,800[††]	7,247	2,852	823	448	425	444

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[*] Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

[**] Pneumonia and influenza

[†] Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

[††] Total includes unknown ages.

[§] Data not available. Figures are estimates based on average of past 4 weeks.

Dengue — Continued

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Editorial Note: The first published clinical account of dengue in Africa is that of Christie (*1*), who observed an outbreak in 1870 in Zanzibar. Subsequent reports of dengue-like illness in East Africa, without laboratory confirmation, have been reported; confusion exists because of the presence of chikungunya and other viruses producing similar clinical illness. In fact, Carey (*2*) suggested that the original report in 1870 more closely described chikungunya virus than dengue fever. Dengue virus (types 1 and 2) has been isolated only in West Africa (Nigeria, Ivory Coast, Upper Volta, Senegal). However, documented dengue type 2 epidemics occurred in the Seychelles islands in 1976-1977 and 1978-1979 (*3,4*). The Seychelles outbreaks and the appearance of dengue type 2 in Somalia and Kenya in 1982 may be the result of the frequent trade among India (where dengue is endemic [*5*]), the islands of the Indian Ocean, and East Africa. Another possibility, however, is extension of dengue from an enzootic transmission cycle involving forest *Aedes* and nonhuman primates; "jungle dengue" (analagous to jungle yellow fever) is known to occur in Malaysia and Senegal.

Aedes aegypti, including domestic and peridomestic forms which feed readily on humans in and around houses, is abundant in coastal Somalia and Kenya, and is the most likely vector of dengue in this region. Water storage is common, providing breeding sites for *A. aegypti*. Other *Aedes* (*Stegomyia*) species (such as *simpsoni* and *metallicus*) are also prevalent and must be considered potential vectors. A better definition of the transmission cycle in this region is needed.

In addition to the cases of dengue reported above, CDC has made serologic diagnoses in several Americans who visited Mogadisho, Somalia, in early 1982. Travelers to Somalia and coastal Kenya should be aware of the possibility of acquiring dengue and should take precautions to avoid mosquito bites.

References

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Poliomyelitis Update — Jamaica

Since the first suspected case of paralytic poliomyelitis was recognized in Jamaica in late March 1982, a total of 56 suspected cases have been reported (Figure 2). Onset of symptoms in the last suspected case occurred on June 28, 1982. No additional cases have been reported since June 16, 1982, from St. James Parish, where the earliest and largest number of cases (44) occurred.

Poliomyelitis – Continued

The second round of oral poliovirus vaccine (OPV) immunizations for persons 6 weeks through 14 years of age, the group in which 88% of the disease occurred, is presently under way. A third immunization round in schools and clinics is scheduled for September 1982.

Reported by Ministry of Health, Jamaica; Div of Viral Diseases, Center for Infectious Diseases, Immunization Div, Quarantine Div, Center for Prevention Svcs, CDC.

Editorial Note: While active surveillance of poliomyelitis continues in Jamaica, no cases have been reported with onset dates more than 24 days after the initiation of the vaccination campaign in a given parish, and no new suspected cases of paralytic poliomyelitis have been reported during the past 5 weeks. Jamaica's Ministry of Health announced on July 29 that the outbreak of poliomyelitis was over.

The first poliomyelitis vaccine campaign delivered one dose of OPV per person to more than 80% of the population, ages 6 weeks through 14 years, between June 1 and June 21, 1982 (*1*). The high coverage reached during this brief period appears to have terminated the outbreak of type 1 poliomyelitis in Jamaica.

Travelers to any country in which vaccine-preventable diseases are or recently have been endemic or epidemic should be adequately protected. Recommendations for immunizations have been published in the *Morbidity and Mortality Weekly Report* (*2-5*).

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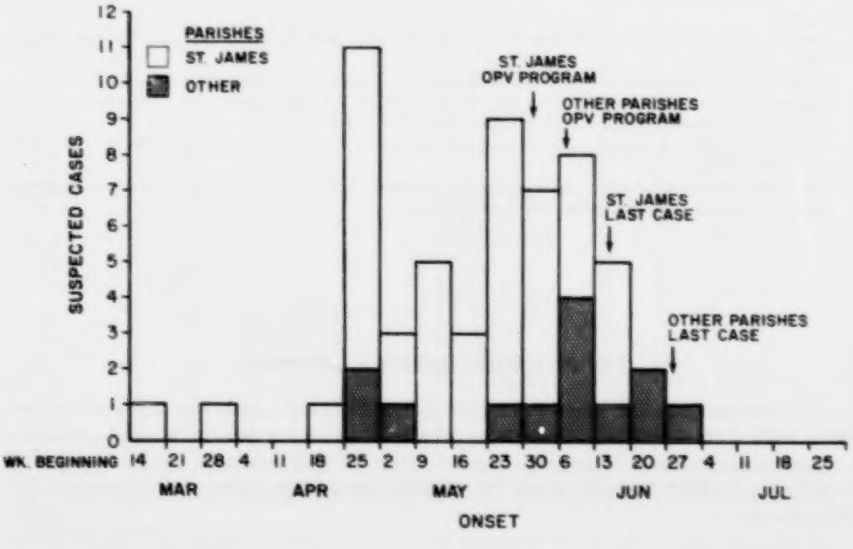
FIGURE 2. Suspected paralytic poliomyelitis cases, by date of onset of symptoms, Jamaica, March 14-August 1, 1982



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31/31

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MMWR

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Perspectives in Disease Prevention and Health Promotion

Aquatic Deaths and Injuries — United States

In 1980, 7,000 drownings, primarily associated with recreational activities, occurred in the United States. After motor vehicle and fall deaths, drownings are the third leading cause of unintentional injury deaths, and for ages 5 to 44, rank second only to motor vehicle deaths. Data show that death rates from drowning are more than five times greater for males than females (*1*) and nearly three times greater for blacks than whites (*2*).

It is often assumed that most aquatic deaths occur in swimming pools, but pools account for only about 10% of all reported drownings; persons are more likely to drown in lakes, rivers, or oceans. Quarries, pits, ornamental ponds, and bathtubs add to the toll (*3*). Residential home pools, however, do play a major role in childhood drownings when toddlers fall or wander into them. There is strong evidence that adequate fencing and self-latching gates substantially reduce the number of childhood drownings and virtually eliminate drownings among toddlers (*4-6*).

Although no precise statistical data exist on the total number of water-related injuries, it is estimated that 140,000 injuries associated solely with swimming activities occur annually (*7*). Diving and head-first sliding into water account for the most serious aquatic injuries because of damage to spinal cords, often as a result of striking the bottom or side of a shallow body of water. Of the estimated 700 spinal cord injuries resulting from aquatic accidents each year, the majority are sufficiently serious to cause permanent paralysis (*8*). A 10-year study of 152 sports-related cervical spinal cord injuries shows that three water-related activities—diving, surfing, and water skiing—accounted for 77% of all reported spinal injuries (*9*). Spinal cord injuries from diving alone exceed the total reported from all other sports combined (*10*).

The data below identify three additional factors that significantly influence aquatic deaths and injuries:

1. In recent years, residential spa and hot tub use has markedly increased. In 1980, an estimated 1,100 persons with spa or hot tub injuries required emergency

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Aquatic Deaths – Continued

room treatment, as compared with only 200 the previous year. Alcohol was cited as a contributory factor in 12 of 30 residential spa-associated deaths reported to the Consumer Product Safety Commission since 1979 (*11*). The high temperatures of spas and hot tubs combined with a moderate level of alcohol in the blood stream tend to accelerate drowsiness. Death often results from drowning after a victim falls asleep (*12*).

2. Coast Guard data show that 7% of the boats involved in mishaps lacked available and accessible personal floatation devices, but this 7% accounted for 29% of fatalities (*3*).
3. Onboard and overboard falls contributed from 20% to over 30% of water-related fatalities, often when the victim was undertaking an activity other than boating (e.g., fishing) (*3*).

Many complex factors, both human and environmental, relate to water safety, including pre-existing illness and alcohol. Alcohol consumption is often cited as an indisputable factor in drowning and injury. One study showed that 47% of adults who drowned had evidence of alcohol in their blood (*2*). Many other studies support those findings and indicate that positive blood-alcohol tests on drowning victims are especially common, even among experienced swimmers.

A retrospective study to determine the epidemiologic features of recreational injuries and to identify intervention strategies to reduce the incidence of such injuries was recently completed by the Washington Department of Social and Health Services.

> Aquatic recreational activities present a hazard for males, generally less than age 25. It is clear that the full spectrum of injury, from minor to death, is possible in aquatic activities. Depending on the age under discussion and the injury, the target problems change. For the young, swimming pools present the greatest aquatic hazard due to drownings. Private rather than public pools are more frequently involved. Yet on an overall basis, swimming pools are not the major focal point for drowning prevention. The same appears true for spinal injuries. Here the target group is the diving teenager. The behavioral implications as well as environmental controls are evident in most of the descriptive literature regarding aquatic injuries, and it is clear prevention strategy cannot ignore the realities of either. (*3*)

Reported by Environmental Health Svcs Div, Center for Environmental Health, CDC.

Editorial Note: A National Conference on Injury Control, co-sponsored by CDC and held at Johns Hopkins School of Hygiene and Public Health on May 18-19, 1981, (*13*) brought together 25 leaders in the injury-control field. They represented public health and medical schools, state and local health departments, and other public and private agencies. The conference report suggests strategies or approaches for transforming existing knowledge and technology into measures that prevent injuries. Some of the suggested intervention strategies to prevent aquatic deaths and injuries are:

1. Develop and implement standards that govern safe pool design.
2. Require licensing for private and public pool construction and ownership based on certain safety requirements, including adequate fencing and accessible rescue and resuscitation equipment.

Aquatic Deaths – Continued

3. Require sign-posting in known hazardous-water areas regarding depth, undertow, or slippery banks.
4. Restrict the sale and consumption of alcoholic beverages in boating, pool, harbor, marina, and beach areas.
5. Impose sanctions for drunken boat drivers.
6. Integrate information into health department home-visit programs to make parents aware of pool, pond, and bathtub hazards.
7. Develop and institute programs for employees, who work in or near bodies of water, on how to recognize hazardous, environmental conditions and about emergency procedures that reduce the consequences of water-related injuries (e.g., procedures for extrication).
8. Conduct surveillance programs using emergency medical service logs, lifeguard data, coroner's records, and data from environmental groups, which are critical to evaluating the effectiveness of interventions.

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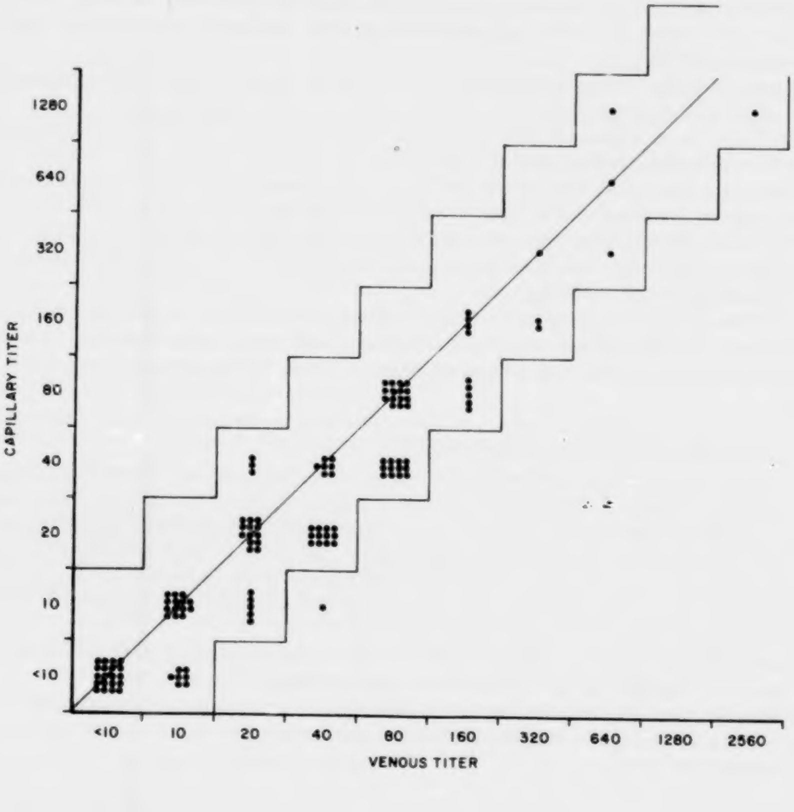
Current Trends

Laboratory Confirmation of Measles Using Capillary Blood Specimens

The Immunization Practices Advisory Committee (ACIP) has recommended that laboratory confirmation be attempted on every suspected case of measles that cannot be linked to another laboratory-confirmed case (*1*). To that end, a finger- or heelstick method of collecting capillary blood on filter-paper strips was evaluated for sensitivity and specificity in the laboratory diagnosis of measles.

The correlation of measles hemagglutination-inhibition (HI) antibody titers was assessed using 125 sets of capillary blood and venous serum specimens obtained from 81 individuals during investigations of sporadic and outbreak-associated cases. The close correspondence between venous and capillary HI antibody titers is indicated in Figure 1 (correlation coefficient = 0.85). Of the 125 sets, 124 (99.2%) had a ≤ two-

FIGURE 1. Relationship of hemagglutination-inhibition antibody titers in capillary blood specimens to venous serum specimens



Measles – Continued

fold difference in titer between the two tests. Only one of the sets (0.8%) showed a significant difference (≥ four-fold difference in titer) between the two tests.

The ability of capillary blood specimens to confirm recent measles infection was compared with that of venous serum specimens, the standard specimen used to confirm measles.[*] Paired acute- and convalescent-phase venous and capillary specimens from 44 individuals were tested. These tests showed substantial agreement (Table 1). The sensitivity of tests on capillary blood was 100%, and the specificity was 96.4%.

Using staphylococcal protein A (SPA) adsorption, measles-specific IgM was assessed on six simultaneously collected venous and capillary specimens (*2*). IgM was detected in both venous and capillary specimens in three sets of specimens; the remaining three sets were negative for IgM in both types of specimens.

A pilot program was carried out in Georgia from February through May 1982 to determine whether a higher proportion of specimens could be obtained from suspected measles cases[†] if capillary-blood testing was available. During the program's initial stages, when filter-paper strips were unavailable for capillary blood testing in several counties and only venipuncture could be used, specimens were obtained from eight of 16 (50%) suspected cases including two of 10 preschool-age (< 5 years) children. In contrast, when filter-paper strips were available, capillary specimens were obtained from 36 of 37 (97%) suspected cases of measles (p = 0.0001), including all 21 of preschool age.

Personnel obtaining capillary blood specimens enthusiastically accepted this

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[*] Laboratory confirmation is defined as a ≥ four-fold rise in measles HI antibody titer.

[†] An illness with a generalized maculopapular rash (lasting more than a day if the report was delayed) accompanied by fever.

TABLE 1. Comparison of capillary blood and venous serologic assessments for diagnosing measles using rises in HI antibody titer between acute- and convalescent- specimens

		Venous acute- and convalescent-phase paired sera		
		≥4-fold rise	<4-fold rise	total
Capillary acute- and convalesent-phase paired specimens	≥ 4-fold rise	16	1	17
	<4-fold rise	0	27	27
Total		16	28	44

		95% confidence limits*
Sensitivity	16/16 = 100%	79.7%-100%
Specificity	27/28 = 96.4%	81.6%-99.9%
Predictive value positive	16/17 = 94.1%	71.3%-99.9%
Predictive value negative	27/27 = 100%	83.6%-100%

*95% binomial confidence limits for proportions

Measles — Continued

method, particularly for use among preschool-age children. All capillary specimens submitted in this pilot program were satisfactory for testing.

Reported by C Baker, S Clark, D Lockridge, S Register, T Seegmuller, G Smith, C Turner, Immunization Program, JW Alley, MD, Div of Public Health, Georgia Dept of Human Resources; DG Ramras, MD, LD Fredericks, MA Harris, MK Hernandez, J Merrill, SJ Parker, CR Peter, PhD, SE Ross, MA Thompson, DrPH, WA Townsend, MD, H Tuller, PB Villalon, M Workman, MD, Dept of Health Svcs, San Diego, L Dales MD, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; Viral Exanthems and Herpes Virus Br, Div of Viral Diseases, Center for Infectious Diseases, Surveillance, Investigations and Research Br, Immunization Div, Center for Prevention Svcs, CDC

Editorial Note: Confirmation of indigenous measles transmission in a given area is aided by laboratory assessment of suspected cases. The eagerness of investigators to obtain specimens, the availability of personnel trained in obtaining the specimens, and the likelihood of obtaining permission to collect specimens affect the proportion of suspected measles cases that undergo laboratory testing. The data presented here indicate that a fingerstick/filter-paper method of blood collection and testing is feasible, acceptable, and accurate.

(Continued on page 428)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	31st Week Ending			Cumulative, First 31 Weeks		
	August 7, 1982	August 8, 1981	Median 1977-1981	August 7, 1982	August 8, 1981	Median 1977-1981
Aseptic meningitis	248	338	229	3,224	3,539	2,490
Brucellosis	3	4	4	93	89	108
Encephalitis: Primary (arthropod-borne & unspec.)	37	36	36	539	578	447
Post-infectious	1	-	5	44	61	131
Gonorrhea: Civilian	18,239	21,304	21,165	539,129	588,355	573,920
Military	542	658	574	15,009	17,425	16,134
Hepatitis: Type A	387	548	548	12,858	15,214	16,885
Type B	397	505	316	12,182	12,123	9,756
Non A, Non B	42	N	N	1,261	N	N
Unspecified	164	202	202	5,342	6,488	5,946
Legionellosis	9	N	N	239	N	N
Leprosy	5	4	4	120	159	104
Malaria	24	17	19	566	850	420
Measles (rubeola)	32	26	144	1,123	2,471	12,563
Meningococcal infections: Total	42	43	32	1,935	2,371	1,787
Civilian	42	42	31	1,923	2,362	1,774
Military	-	1	-	12	9	13
Mumps	30	49	112	4,003	3,013	10,728
Pertussis	45	45	51	893	666	785
Rubella (German measles)	28	57	63	1,867	1,662	10,372
Syphilis (Primary & Secondary): Civilian	638	596	450	19,261	17,749	14,085
Military	4	3	5	247	230	182
Tuberculosis	504	433	563	15,202	15,737	16,521
Tularemia	4	8	8	129	133	114
Typhoid fever	5	15	15	223	298	272
Typhus fever, tick-borne (RMSF)	54	49	51	652	818	691
Rabies, animal	76	149	111	3,700	4,566	2,901

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Calif. 1)	50	Paralytic	3
Cholera	-	Psittacosis (Mass. 2, Idaho 1, Calif. 2)	81
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria (Tex. 1)	1	Tetanus (Minn. 1, D.C. 1)	44
Leptospirosis (Tex. 1)	34	Trichinosis (Mo. 1)	60
Plague	8	Typhus fever, flea-borne (endemic, murine)	20

TABLE III. Cases of specified notifiable diseases, United States, weeks ending August 7, 1982 and August 8, 1981 (31st week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	248	93	539	44	539,129	588,355	387	397	42	164	9	120
NEW ENGLAND	27	3	18	5	13,221	14,503	7	12	1	14	-	1
Maine	2	-	-	-	625	745	-	-	-	-	-	-
N.H.	7	-	1	-	371	524	-	-	-	-	-	-
Vt.	-	-	-	-	253	250	2	-	1	-	-	-
Mass.	11	-	6	-	6,110	5,999	2	4	-	13	-	-
R.I.	2	-	-	-	871	765	2	1	-	-	-	-
Conn.	5	3	11	5	4,991	6,220	1	7	-	1	-	1
MID. ATLANTIC	41	3	57	10	69,237	69,293	46	51	4	9	1	4
Upstate N.Y.	16	3	21	3	11,318	11,231	23	20	1	4	-	1
N.Y. City	1	-	11	-	28,854	28,910	10	18	-	-	-	1
N.J.	22	-	12	-	12,687	13,402	13	13	3	5	1	1
Pa.	2	-	13	7	16,378	15,750	U	U	U	U	-	1
E.N. CENTRAL	27	1	118	10	75,558	88,925	54	53	-	9	4	3
Ohio	15	1	39	4	21,789	29,399	28	27	-	3	4	-
Ind.	2	-	29	3	9,333	7,834	7	3	-	1	-	-
Ill.	1	-	9	1	18,574	24,682	2	1	-	-	-	3
Mich.	6	-	37	-	18,667	18,960	14	21	-	4	-	-
Wis.	3	-	4	2	7,195	8,050	3	1	-	1	-	-
W.N. CENTRAL	11	14	40	3	26,348	27,914	17	17	1	5	1	3
Minn.	-	1	16	1	3,992	4,350	-	3	-	-	-	1
Iowa	4	3	15	1	2,768	3,080	1	-	-	-	1	-
Mo.	-	4	4	-	12,327	12,849	6	5	-	5	-	1
N. Dak.	2	-	-	-	353	385	-	-	-	-	-	-
S. Dak.	1	1	-	1	719	768	1	2	-	-	-	1
Nebr.	3	2	2	-	1,595	2,140	2	6	1	-	-	-
Kans.	1	3	3	-	4,594	4,342	7	1	-	-	-	-
S. ATLANTIC	51	18	93	6	127,757	144,585	44	84	4	29	1	7
Del.	1	-	-	-	2,333	2,305	3	-	-	3	-	-
Md.	2	-	15	-	18,311	16,425	4	12	2	4	-	3
D.C.	-	-	-	-	8,042	8,706	-	6	-	1	-	-
Va.	13	7	19	1	11,852	13,201	11	9	1	6	-	1
W. Va.	-	-	2	-	1,626	2,199	-	-	-	-	-	-
N.C.	7	-	9	1	23,010	22,353	-	7	-	2	-	-
S.C.	3	2	-	-	14,314	13,976	4	9	-	2	-	-
Ga.	1	1	8	-	9,483	30,022	9	16	-	4	-	-
Fla.	24	8	40	4	38,786	35,398	13	25	1	7	1	3
E.S. CENTRAL	15	11	31	2	47,930	48,936	19	29	5	7	-	-
Ky.	-	-	-	-	6,460	6,094	6	8	2	1	-	-
Tenn.	2	6	14	-	18,630	18,344	8	10	-	1	-	-
Ala.	13	4	12	2	14,470	15,108	2	11	3	5	-	-
Miss.	-	1	5	-	8,370	9,390	3	-	-	-	-	-
W.S. CENTRAL	23	23	68	1	78,079	78,071	73	21	-	55	-	18
Ark.	-	4	3	-	6,280	5,702	1	2	-	4	-	-
La.	3	6	10	-	14,656	13,230	17	6	-	12	-	-
Okla.	2	3	18	-	8,546	8,253	1	3	-	3	-	-
Tex.	18	10	37	1	48,597	50,886	54	10	-	36	-	18
MOUNTAIN	18	-	18	3	18,994	23,006	22	13	2	7	1	2
Mont.	-	-	-	-	780	847	2	-	-	-	-	-
Idaho	2	-	-	-	901	1,022	1	1	-	-	-	1
Wyo.	-	-	-	-	563	533	1	-	-	-	-	-
Colo.	3	-	8	1	4,962	6,212	2	6	-	-	1	-
N. Mex.	-	-	-	-	2,423	2,506	3	1	-	1	-	-
Ariz.	U	-	6	-	5,104	6,932	U	U	U	U	U	-
Utah	6	-	-	2	904	1,074	4	-	1	1	-	1
Nev.	7	-	4	-	3,347	3,880	9	5	1	5	-	-
PACIFIC	35	20	96	4	82,015	93,122	105	117	25	29	1	82
Wash.	4	-	9	-	6,763	7,588	4	15	2	1	1	7
Oreg.	-	-	2	-	4,597	5,560	8	3	1	1	-	1
Calif.	28	19	81	4	67,191	75,819	90	94	22	26	-	52
Alaska	1	1	3	-	1,999	2,330	-	3	-	-	-	1
Hawaii	2	-	1	-	1,465	1,825	3	2	-	1	-	21
Guam	U	-	-	-	72	73	U	U	U	U	U	-
P.R.	-	-	1	-	1,722	1,939	6	4	-	2	-	-
V.I.	-	-	-	-	137	112	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	187	267	U	U	U	U	U	10

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 7, 1982 and August 8, 1981 (31st week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	24	566	32	1,123	2,471	42	1,935	30	4,003	45	26	1,867	1,862
NEW ENGLAND	1	28	-	9	75	-	103	2	162	3	1	17	111
Maine	-	-	-	-	5	-	6	-	35	-	-	-	33
N.H.	-	-	-	2	6	-	14	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	1	7	1	-	-	-
Mass.	-	21	-	2	54	-	27	1	78	2	1	5	23
R.I.	-	2	-	-	-	-	11	-	14	-	-	1	-
Conn.	1	5	-	3	8	-	39	-	16	-	-	3	12
MID. ATLANTIC	8	79	2	153	799	15	347	-	251	8	2	90	195
Upstate N.Y.	4	20	2	107	203	9	122	-	54	4	-	43	89
N.Y. City	3	24	-	38	69	1	59	-	42	-	-	31	49
N.J.	-	22	-	4	53	2	73	-	36	-	2	16	46
Pa.	1	13	-	4	474	3	93	-	119	4	-	-	11
E.N. CENTRAL	1	37	1	67	77	4	231	6	2,134	14	1	154	349
Ohio	-	9	-	1	15	1	87	-	1,552	2	-	-	3
Ind.	-	1	-	2	8	-	22	1	37	-	-	26	122
Ill.	-	4	-	23	23	1	63	1	168	7	-	55	84
Mich.	1	21	1	41	30	2	47	4	294	4	1	47	34
Wis.	-	2	-	-	1	-	12	-	83	1	-	26	106
W.N. CENTRAL	-	15	-	49	10	3	88	3	539	4	-	59	76
Minn.	-	2	-	-	3	1	21	2	414	1	-	9	7
Iowa	-	5	-	-	1	-	5	1	30	-	-	-	4
Mo.	-	4	-	2	1	-	25	-	15	-	-	38	2
N. Dak.	-	-	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	2	11	-	-	-	-	-	1
Kans.	-	1	-	44	1	-	14	-	79	3	-	11	62
S. ATLANTIC	4	88	2	37	340	11	386	6	228	9	3	71	126
Del.	2	3	-	-	-	-	-	-	10	-	-	1	1
Md.	-	12	-	3	2	1	24	1	23	-	-	33	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	-	26	-	14	6	3	45	1	32	-	1	14	4
W. Va.	-	6	-	2	9	1	8	3	84	-	2	3	22
N.C.	-	3	-	-	3	-	76	-	11	4	-	1	5
S.C.	-	4	-	-	-	4	46	-	13	-	-	1	8
Ga.	1	11	-	-	108	-	81	-	11	3	-	6	35
Fla.	1	20	2	17	211	2	104	1	44	2	-	12	50
E.S. CENTRAL	1	7	-	8	5	2	125	1	38	1	3	43	26
Ky.	-	4	-	1	1	-	20	-	12	-	3	25	17
Tenn.	-	-	-	6	2	1	53	-	14	1	-	2	8
Ala.	-	-	-	-	2	1	45	1	6	-	-	-	1
Miss.	1	3	-	1	-	-	7	-	6	-	-	16	-
W.S. CENTRAL	2	44	15	30	801	2	228	2	157	3	1	99	136
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	3
La.	-	3	-	2	2	-	42	-	5	-	-	1	9
Okla.	-	6	12	12	5	-	24	-	-	-	-	3	-
Tex.	2	32	3	16	793	2	150	2	146	3	1	94	124
MOUNTAIN	2	17	-	8	33	1	93	2	69	-	-	67	80
Mont.	1	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	-	-	3	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	7
Colo.	-	8	-	5	9	-	38	1	9	-	-	5	30
N. Mex.	-	2	-	-	8	-	14	-	-	-	-	5	5
Ariz.	U	3	U	1	5	U	15	U	33	U	U	12	19
Utah	1	2	-	-	-	1	8	1	14	-	-	20	4
Nev.	-	-	-	-	10	-	3	-	5	-	-	10	9
PACIFIC	5	251	12	764	331	4	336	8	425	3	15	1,267	563
Wash.	1	13	1	32	3	1	36	-	61	-	2	37	88
Oreg.	-	9	-	8	3	-	65	-	-	-	-	6	49
Calif.	4	227	10	719	323	3	222	8	350	3	9	1,211	412
Alaska	-	-	-	1	-	-	10	-	6	-	4	5	1
Hawaii	-	2	1	4	2	-	3	-	8	-	-	8	13
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	-	81	258	-	8	-	46	3	-	7	3
V.I.	-	-	-	-	23	-	-	-	-	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	1	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 7, 1982 and August 8, 1981 (31st week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	19,261	17,749	504	15,202	129	5	223	54	652	3,700
NEW ENGLAND	327	367	14	407	2	-	14	1	7	27
Maine	1	2	1	33	-	-	-	-	-	20
N.H.	1	12	-	11	-	-	-	-	1	-
Vt.	1	13	2	9	-	-	2	-	-	-
Mass.	219	245	8	271	2	-	10	-	3	4
R.I.	17	21	-	17	-	-	-	1	2	-
Conn.	88	74	3	66	-	-	2	-	1	3
MID. ATLANTIC	2,653	2,667	107	2,586	7	-	34	3	27	109
Upstate N.Y.	265	241	20	442	7	-	5	2	9	54
N.Y. City	1,593	1,603	44	939	-	-	20	-	1	-
N.J.	359	361	25	521	-	-	5	1	11	8
Pa.	436	462	18	664	-	-	4	-	6	47
E.N. CENTRAL	1,046	1,222	61	2,323	1	1	17	1	61	420
Ohio	181	161	12	402	-	-	8	1	57	60
Ind.	116	113	7	306	-	-	-	-	-	62
Ill.	514	673	33	959	-	-	3	-	4	215
Mich.	176	217	-	530	-	1	6	-	-	4
Wis.	59	58	9	126	1	-	-	-	-	79
W.N. CENTRAL	349	358	14	442	16	-	8	2	19	833
Minn.	67	127	5	76	-	-	5	-	-	146
Iowa	18	14	2	50	1	-	1	1	4	262
Mo.	212	190	4	208	11	-	1	1	6	74
N. Dak.	6	6	-	8	-	-	-	-	-	73
S. Dak.	-	2	-	19	-	-	-	-	3	71
Nebr.	11	4	1	20	2	-	-	-	1	99
Kans.	35	15	2	61	2	-	1	-	5	108
S. ATLANTIC	5,240	4,669	130	3,119	10	-	34	32	366	633
Del.	9	7	1	26	-	-	-	-	-	2
Md.	285	354	19	364	1	-	9	4	38	33
D.C.	294	380	7	121	-	-	-	-	-	-
Va.	367	423	28	343	2	-	3	9	54	321
W. Va.	20	15	11	99	-	-	3	-	6	33
N.C.	386	354	9	502	-	-	-	11	161	42
S.C.	299	309	7	288	6	-	3	8	81	34
Ga.	1,071	1,202	11	468	-	-	-	-	24	126
Fla.	2,509	1,625	37	908	1	-	16	-	2	42
E.S. CENTRAL	1,344	1,148	67	1,418	6	-	14	6	50	436
Ky.	75	62	23	367	-	-	-	-	-	89
Tenn.	354	431	15	465	4	-	2	4	33	268
Ala.	497	321	23	408	-	-	9	-	6	78
Miss.	418	334	6	178	2	-	3	2	11	1
W.S. CENTRAL	5,032	4,281	41	1,830	66	1	23	7	109	722
Ark.	125	83	6	194	41	-	2	3	20	101
La.	1,130	983	-	286	3	-	3	-	-	21
Okla.	111	99	2	238	21	-	2	-	55	136
Tex.	3,666	3,116	33	1,114	1	1	16	4	34	464
MOUNTAIN	479	464	8	430	15	-	8	1	9	145
Mont.	3	11	3	26	2	-	-	-	2	54
Idaho	22	17	3	22	1	-	-	1	2	6
Wyo.	12	7	-	2	1	-	-	-	1	13
Colo.	131	144	-	52	3	-	2	-	1	21
N. Mex.	114	88	-	84	1	-	-	-	1	11
Ariz.	107	105	U	177	-	U	4	U	-	30
Utah	14	16	2	25	7	-	1	-	-	7
Nev.	76	76	-	42	-	-	1	-	2	3
PACIFIC	2,731	2,573	62	2,667	6	3	71	1	4	375
Wash.	63	94	2	172	1	-	3	-	-	2
Oreg.	63	57	1	109	-	-	1	1	1	1
Calif.	2,557	2,369	56	2,158	4	3	64	-	3	297
Alaska	8	10	-	46	1	-	1	-	-	75
Hawaii	74	43	3	182	-	-	2	-	-	-
Guam	1	-	U	8	-	U	-	U	-	-
P.R.	369	399	-	208	-	-	2	-	-	32
V.I.	17	13	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	68	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending August 7, 1982 (31st week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	627	430	134	33	17	13	40
Boston, Mass	173	100	43	16	7	7	18
Bridgeport, Conn	48	39	7	2	-	-	2
Cambridge, Mass	21	18	2	1	-	-	4
Fall River, Mass	30	21	5	4	-	-	-
Hartford, Conn	36	24	11	-	1	-	3
Lowell, Mass	23	19	1	1	2	-	-
Lynn, Mass	18	12	5	-	1	-	-
New Bedford, Mass	23	21	2	-	-	-	1
New Haven, Conn	58	38	17	2	-	1	-
Providence, R.I	75	58	11	2	2	2	4
Somerville, Mass	6	6	1	-	1	-	-
Springfield, Mass	38	20	12	3	1	2	3
Waterbury, Conn	22	16	4	-	2	-	3
Worcester, Mass	54	38	13	2	-	1	2
MID. ATLANTIC	2,559	2,041	275	98	65	52	94
Albany, N.Y	42	31	5	3	1	2	-
Allentown, Pa	20	17	3	-	-	-	1
Buffalo, N.Y	116	82	25	7	1	1	10
Camden, N.J	35	23	7	2	1	2	1
Elizabeth, N.J	19	15	4	-	-	-	2
Erie, Pa †	44	35	7	1	1	-	-
Jersey City, N.J	51	32	11	6	1	1	1
N.Y. City, N.Y. §	1,400	1,275	8	22	38	30	44
Newark, N.J	60	26	22	10	1	1	5
Paterson, N.J	29	19	5	3	1	-	6
Philadelphia, Pa †	382	234	100	29	10	9	16
Pittsburgh, Pa †	62	37	20	3	1	1	2
Reading, Pa	26	19	5	1	1	-	1
Rochester, N.Y	103	72	23	3	2	3	2
Schenectady, N.Y	12	12	-	-	-	-	-
Scranton, Pa †	22	18	2	2	-	-	2
Syracuse, N.Y	55	32	17	1	3	2	-
Trenton, N.J	40	28	8	3	1	-	-
Utica, N.Y	22	20	1	1	-	-	-
Yonkers, N.Y	19	14	2	1	2	-	1
E.N. CENTRAL	2,037	1,275	485	125	72	80	57
Akron, Ohio	28	19	4	2	1	2	-
Canton, Ohio	58	38	15	2	-	3	1
Chicago, Ill	511	299	130	38	18	26	10
Cincinnati, Ohio	132	79	28	11	9	5	9
Cleveland, Ohio	163	99	49	4	6	5	4
Columbus, Ohio	132	91	22	10	5	4	6
Dayton, Ohio	85	54	20	1	5	5	2
Detroit, Mich	216	122	51	26	7	10	3
Evansville, Ind	58	39	12	4	1	2	3
Fort Wayne, Ind	38	24	14	-	-	-	1
Gary, Ind	7	2	4	-	1	-	-
Grand Rapids, Mich	58	44	9	2	2	1	-
Indianapolis, Ind	140	90	37	4	2	7	6
Madison, Wis	32	19	5	3	4	1	3
Milwaukee, Wis	142	94	40	3	2	3	1
Peoria, Ill	42	26	8	2	2	4	3
Rockford, Ill	36	24	8	1	3	-	-
South Bend, Ind	36	29	4	3	-	-	3
Toledo, Ohio	72	42	21	5	2	2	1
Youngstown, Ohio	51	41	4	4	2	-	2
W.N. CENTRAL	660	425	148	42	21	23	10
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn	37	24	11	1	1	-	1
Kansas City, Kans	26	11	10	3	1	1	-
Kansas City, Mo	123	84	31	6	2	-	1
Lincoln, Nebr	19	15	3	1	-	-	-
Minneapolis, Minn	78	48	15	5	3	7	2
Omaha, Nebr	77	37	25	6	5	4	3
St. Louis, Mo	134	79	34	13	5	3	3
St. Paul, Minn	62	46	6	3	1	6	-
Wichita, Kans	51	30	13	4	2	2	-
S. ATLANTIC	1,161	665	319	95	37	45	37
Atlanta, Ga	94	54	30	9	1	-	1
Baltimore, Md	267	156	76	21	9	5	2
Charlotte, N.C	53	32	10	4	3	4	3
Jacksonville, Fla	116	69	27	10	5	5	4
Miami, Fla	85	45	21	8	4	7	4
Norfolk, Va	42	18	17	5	-	2	-
Richmond, Va	82	46	30	1	1	4	5
Savannah, Ga	39	23	12	4	-	-	2
St. Petersburg, Fla	86	72	10	1	1	2	3
Tampa, Fla	65	37	16	5	3	4	5
Washington, D.C	161	79	46	20	6	10	2
Wilmington, Del	71	34	24	7	4	2	6
E.S. CENTRAL	748	443	189	58	32	26	27
Birmingham, Ala	107	59	27	9	5	10	1
Chattanooga, Tenn	38	19	11	6	1	1	1
Knoxville, Tenn	47	34	7	4	2	-	-
Louisville, Ky	101	53	32	7	3	6	3
Memphis, Tenn	251	160	54	21	10	6	11
Mobile, Ala	52	33	11	3	3	2	5
Montgomery, Ala	48	32	14	2	-	-	1
Nashville, Tenn	104	56	33	6	8	1	5
W.S. CENTRAL	1,070	581	286	103	68	31	28
Austin, Tex	32	19	4	6	3	-	-
Baton Rouge, La	52	26	19	1	2	4	4
Corpus Christi, Tex	44	23	11	5	4	1	-
Dallas, Tex	190	110	51	20	4	5	2
El Paso, Tex	50	32	8	2	6	1	4
Fort Worth, Tex	54	30	11	6	4	3	5
Houston, Tex	200	83	60	29	21	7	2
Little Rock, Ark	72	41	18	8	2	3	4
New Orleans, La	128	71	45	8	3	1	-
San Antonio, Tex	156	84	45	14	10	3	4
Shreveport, La	17	13	3	1	-	-	-
Tulsa, Okla	75	49	11	3	9	3	3
MOUNTAIN	505	296	104	53	31	21	28
Albuquerque, N.Mex	46	26	7	8	3	2	1
Colo. Springs, Colo	37	17	10	6	2	2	5
Denver, Colo	98	63	20	5	6	4	6
Las Vegas, Nev	59	28	20	7	4	-	1
Ogden, Utah	18	12	1	2	2	1	3
Phoenix, Ariz	115	68	19	16	6	6	4
Pueblo, Colo	13	9	1	1	2	-	1
Salt Lake City, Utah	53	28	11	4	4	6	-
Tucson, Ariz	66	45	15	4	2	-	7
PACIFIC	1,654	1,037	375	125	66	50	80
Berkeley, Calif	20	15	3	-	1	1	1
Fresno, Calif	53	32	15	2	1	3	3
Glendale, Calif	19	13	4	2	-	-	1
Honolulu, Hawaii	57	28	16	3	6	4	5
Long Beach, Calif	88	56	20	5	4	3	1
Los Angeles, Calif	492	295	118	45	19	14	14
Oakland, Calif	76	49	15	7	2	3	2
Pasadena, Calif	24	21	1	1	-	1	-
Portland, Oreg	117	76	30	5	4	2	5
Sacramento, Calif	75	43	18	6	2	6	6
San Diego, Calif	116	70	22	13	10	1	15
San Francisco, Calif	126	85	26	10	3	2	3
San Jose, Calif	163	106	37	11	8	2	15
Seattle, Wash	130	82	31	8	5	4	2
Spokane, Wash	60	39	11	5	1	4	4
Tacoma, Wash	38	28	8	2	-	-	3
TOTAL	11,021††	7,193	2,315	732	409	341	401

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality March 1982		Estimated number of physician contacts March 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	172,320	879.1	103,081,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	7,040	35.9	5,394,000
Malignant neoplasms (140-208)	1,804,120	36,930	188.4	1,511,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	66,570	339.6	5,856,000
Suicides, homicides (E950-E978)	1,401,880	4,290	21.9	–
Chronic liver disease and cirrhosis (571)	301,070	2,350	12.0	156,000
Cerebrovascular diseases (430-438)	280,430	13,839	70.6	440,000
Pneumonia and influenza (480-487)	124,830	4,920	25.1	1,389,000
Diabetes mellitus (250)	117,340	2,800	14.3	2,568,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	5,700	29.1	2,187,000
Prenatal care[5]				2,452,000
Infant mortality[5]		3,600	11.8 /1,000 live births	

[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the mid-point of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 4, July 14, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 3, June 21, 1982, p.1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 4, July 14, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, March 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 31, No. 3, June 21, 1982, p.1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Measles – Continued

Measles HI antibody titers in capillary blood and venous sera obtained from the same individuals have been compared previously, with good agreement (*3*). The data presented here corroborate these findings. This method of collection and testing, if used correctly, can yield valid laboratory assessments. Filter-paper capillary blood assessments were as sensitive as venous serum assessments in detecting seroconversion and were also highly specific. IgM can probably be measured accurately using SPA adsorption.

The fingerstick method of obtaining blood is acceptable to donors, their parents, and blood collectors (*4*). After a brief orientation, blood collectors were able to obtain satisfactory specimens.

Any laboratory that can perform measles HI antibody tests can measure HI antibody from filter-paper strips after extracting blood from the filter papers by a standardized elution technique. Accurate testing requires a standard volume of blood, which is assured by complete filling of the areas indicated on the filter-paper strips.

The fingerstick method potentially allows all suspected cases, particularly in preschool children, access to laboratory assessment. Persons desiring information about laboratory testing for measles using capillary blood on filter-paper strips should contact the immunization programs of their state health departments.

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The Surgeon General's Warning on Marijuana

The Surgeon General of the Public Health Service has issued the following warning on marijuana:

Marijuana use is a major public health problem in the United States. In the past 20 years, its use has increased 30-fold; it is estimated that more than a quarter of the American population has used it. The age at which persons first use marijuana has decreased gradually to the junior high school years. Until recently, nearly 11% of high school seniors used it, and although that figure has declined to 7%, its daily use still exceeds that of alcohol; more high school seniors use marijuana than smoke cigarettes. In a recent study, 32% of those surveyed had used marijuana during the previous 30 days, while 25% had smoked tobacco.

Marijuana – Continued

On March 24, 1982, the Department of Health and Human Services submitted to Congress a report reviewing the consequences of marijuana use. *Marijuana and Health, 1982,* ninth in a series, is primarily based on two recently conducted, comprehensive, scientific reviews by the Institute of Medicine of the National Academy of Sciences, the Canadian Addiction Research Foundation, and the World Health Organization (WHO). Both independent reviews corroborate the Public Health Service's findings of health hazards associated with marijuana use: Acute intoxication with marijuana interferes with many aspects of mental functioning and has serious, acute effects on perception and skilled performance, such as driving and other complex tasks involving judgement or fine motor skills.

Among the known or suspected chronic effects of marijuana are:

1. short-term memory impairment and slowness of learning.
2. impaired lung function similar to that found in cigarette smokers. Indications are that more serious effects, such as cancer and other lung disease, follow extended use.
3. decreased sperm count and sperm motility.
4. interference with ovulation and pre-natal development.
5. impaired immune response.
6. possible adverse effects on heart function.
7. by-products of marijuana remaining in body fat for several weeks, with unknown consequences. The storage of these by-products increases the possiblilties for chronic, as well as residual, effects on performance, even after the acute reaction to the drug has worn off.

Of special concern are the long-term developmental effects in children and adolescents, who are particularly vulnerable to the drug's behavioral and psychological effects. The "amotivational syndrome," characterized by a pattern of energy loss, diminished school performance, harmed parental relationships, and other behavorial disruptions, has been associated with prolonged marijuana use by young persons. Although more research is required, recent national surveys report that 40% of heavy users experience some or all of those symptoms.

The Public Health Service concludes that marijuana has a broad range of psychological and biological effects, many of which are dangerous and harmful to health, and it supports the major conclusion of the National Academy of Sciences' Institute of Medicine.

The Morbidity and Mortality Weekly Report, circulation 111,113, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

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As announced in the July 23 and 30 issues of the *MMWR*, the *MMWR* and its allied publications will become available on a paid subscription basis on October 1, 1982. A limited number of health officials and disseminators of public health information will continue to receive these publications without charge. Such officials are now being notified.

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Epidemiologic Notes and Reports

Arboviral Encephalitis — United States, 1982

Sixteen cases of arboviral encephalitis in humans have been reported from four states (Florida, Georgia, New York, and Wisconsin) in 1982.

In Florida, a fatal case of eastern equine encephalitis (EEE) was confirmed in a 75-year-old resident of Orlando, with onset of illness on June 12. A second suspected case in a 14-year-old male from central Florida, onset July 23, is currently under investigation. Evidence of EEE viral activity was provided by seroconversions between May 31 and July 16 in 26 of 1494 sentinel chickens in nine counties. Approximately 150 clinical cases of encephalitis have occurred among horses in northern and central Florida; EEE virus has been isolated from the brains of four animals, and 58 cases have serologic evidence for EEE infection. The incidence of equine cases far exceeds that for 1981 (eight cases with serologic evidence).

In south Georgia, two human cases of EEE have been reported: one from Lowndes County (47-year-old female, with illness onset July 18, fatal outcome) and one from Brantley County (2-year-old male, onset July 10, recovered). Equine cases appeared in late June and continue to be reported from the southern part of the state; of approximately 50 cases recognized to date, 18 have been confirmed by virus isolation. EEE has affected penned quail and pheasants on six farms, resulting in over 4,000 deaths, principally among young birds.

Coincident with increased activity of EEE virus in Georgia is an unusual incidence of California encephalitis. In May and June, five serologically confirmed cases occurred in children 3 months to 10 years of age residing in Bibb County (one case), Coffee County (two), and Jeff Davis County (two). For three of the cases, La Crosse virus was identified by neutralization tests as the etiologic agent. Other cases are currently under investigation, and active surveillance has been initiated.

New York has reported one confirmed and six presumed cases of California encephalitis. One patient, a 3-year-old female from Rensselaer County, onset July 20, has been confirmed as having a case of La Crosse encephalitis. The other cases have been diagnosed presumptively (on the basis of antibody in a single serum sample) as Jamestown Canyon virus (two patients who died, ages 45 and 79, from Albany

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Arboviral Encephalitis – Continued

County, onsets June 1 and 2; one who died, age 86, from Suffolk County, onset July 8; one who recovered, age 4, from Niagara County, onset June 2; one who recovered, age 33, from Saratoga County, onset July 8; and one who recovered, age 70, from Ulster County, onset June 25).

In Wisconsin, one serologically confirmed case of La Crosse encephalitis has been reported in a 10-year-old girl from Prairie du Chien, onset July 10.

Other states have reported arboviral encephalitis in domestic animals but not humans. Single cases of western equine encephalitis (WEE) have occurred in Arizona, California, Colorado, and Texas; and seven cases of unspecified etiology (presumably WEE) have been reported from North Dakota. Equine cases of EEE have been documented in South Carolina and Maryland.

Although no human cases of St. Louis encephalitis (SLE) have been recognized, low prevalences of SLE antibodies have been detected in juvenile wild birds in Kentucky, Mississippi, Ohio, and Tennessee.

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Editorial Note: EEE is a rare disease of man in the United States; in the past decade, the annual incidence has been ≤ eight cases (*1*). The disease occurs principally along the Atlantic and Gulf coasts, as well as inland near fresh-water swamps. The virus is maintained in a cycle involving *Culiseta melanura* mosquitoes and wild birds, but epidemic transmission to horses and humans may involve other vectors, including species of *Aedes* and *Coquillettidia*. The excess of cases in central Florida and Georgia in 1982 is believed to be due to heavy rains, resulting in high populations of mosquito vectors. A peculiar aspect of the epidemiology of EEE is the occurrence of epornitics in penned exotic birds (quail, pheasants, chukar partridges), with attack rates of up to 50% and serious economic losses. In these flocks, EEE virus is transmitted directly from bird-to-bird by pecking and cannibalism.

Arboviral Encephalitis – Continued

The high incidence of California encephalitis in Georgia due to La Crosse virus is also unusual. This virus is responsible for 50 to 150 cases annually in the United States; although previously reported in Georgia and elsewhere in the southern United States, La Crosse encephalitis predominantly affects the northcentral states. The principal vector is *A. triseriatus,* which breeds in tree-holes and peridomestic containers. Excessive rainfall in the area may be a factor in increased vector density and viral activity.

Jamestown Canyon virus, also a member of the California virus serogroup, has been clearly implicated as a human pathogen only since 1980. In addition to the reports from New York, isolated encephalitis cases have been found in Indiana and Ontario, Canada. Of interest is the age distribution of the New York patients (five of six cases among adults, three over 70 years of age) and the high case-fatality rate. In contrast, La Crosse virus principally affects children under 12 years of age and has a low case-fatality rate (under 1%). It should be emphasized that the New York cases were presumptively diagnosed on the basis of antibody in a single serum, a finding that may reflect remote infection unrelated to the current illness. In New York, Jamestown Canyon virus is transmitted by *A. communis* group mosquitoes; deer are the primary vertebrate host in the cycle, but transovarial transmission in the vector is important in maintenance of the virus.

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Cercarial Dermatitis among Bathers in California; Katayama Syndrome among Travelers to Ethiopia

Cercarial dermatitis – California: In late August 1981, four persons sought medical attention for dermatitis after swimming or wading in a cove of the Mad River at Camp Bauer in Humboldt County, California, 10 miles from the Pacific coast. Subsequent investigation uncovered 12 additional cases later diagnosed as cercarial dermatitis. Interviews with 14 patients revealed that all were exposed between August 29 and September 2, and that the most common complaint was pruritis occurring within 1½ hours after water contact. Discomfort ranged from moderate to severe. In a few persons, pruritis persisted several days; those patients were treated with antipruritics.

These clinical reports led to a search for evidence of parasites at the site of exposure, a 100-yard stretch of beach bordering a large pool of sluggishly moving water. Snails of the genus *Physa* were noted in the pool's shallows. They were taken to the Humboldt County Health Department laboratory, where furcocercous cercariae were observed emerging from snails held in dishes of water. As a control measure, authorities posted warning signs on the beach.

Cecarial Dermatitis – Continued

Katayama syndrome—Ethiopia: On January 11, 1982, a physician in Gunnison, Colorado, requested diagnostic advice for a patient with a history of intermittent fever, cough, lethargy, and myalgias associated with an absolute eosinophilia. The patient had been ill for 5 weeks, with onset of illness on December 6, 1981, one week after he returned from rafting the Omo River in Ethiopia. Preliminary investigation revealed that, among eleven travelers, five had similar illnesses—four with fever and eosinophilia and one with malaise and eosinophilia. Onset dates ranged from December 6 to December 21. All five patients had sought medical care in December 1981, but various diagnostic evaluations, including thick blood film examination, serology for malaria and schistosomiasis, and stool examination for ova and parasites, had not provided a diagnosis.

Katayama syndrome (acute schistosomiasis) was suspected, and stool, urine, and serum specimens taken between January 10 and February 10, 1982, were examined from 10 of 11 travelers; the eleventh traveler had similar but independent evaluation in Sweden in early January. At least three 1-gram stool samples from each of nine patients were processed by the modified Ritchie concentration technique (MRCT). Formal-ether concentrations were done on single stool specimens from the other two. All symptomatically ill travelers and one asymptomatic one had *Schistosoma mansoni* eggs in their stools, with counts ranging from three to 15 eggs/gram of stool. The five remaining asymptomatic travelers had no eggs on examination of the entire sediment from at least 3 grams of stool. All egg-positive persons had positive IFA tests for schistosomiasis, while all egg-negative persons had negative tests. Those with proven *S. mansoni* were treated with a single dose of oxamniquine (30 mg/kg). Repeat stool examinations (at least 3 gm by the MRCT) 1 month post-treatment were negative. Concurrently, five of six patients who initially had negative tests were retested and remained egg- and IFA-negative.

The rafting trip had begun on November 7, 1981. In addition to occasional contact with the Omo River, the travelers often bathed in tributary streams entering the Omo canyon. They iodinated drinking water and most iodinated shower water, especially during the latter part of the trip. They were aware of the risk of contracting schistosomiasis from the lower stretches of river and particularly from the Mui River, where their trip ended on November 26; consequently, they iodinated all Mui River water used for bathing or drinking. Thereafter they avoided any contact with untreated natural waters.

A survey of the entire group revealed no specific mode or site of exposure. Among multiple bathing sites, three pools were used by all infected travelers, as well as by some uninfected ones. Those who towel-dried had a reduced likelihood of infection, but that was not statistically significant; and one person who repeatedly towel-dried was infected.

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Cecarial Dermatitis – Continued

Editorial Note: Schistosome life cycles are characterized by asexual reproduction in an extremely restricted range of snails (intermediate host) and sexual reproduction (oviposition) in a restricted range of vertebrates (definitive host). Vertebrates become infected when free-swimming furcocercous (fork-tailed) cercariae emerge from snails and penetrate the skin, losing their tails and becoming schistosomulae (juvenile worms).

Man was not a suitable, definitive host in the first outbreak, and the schistosomulae died in the skin, initiating cercarial dermatitis (schistosome dermatitis, swimmer's itch, clam digger's itch, sea bather's itch). Many species of schistosomes throughout the world may produce this syndrome, including some parasites of sea birds and marine snails. Usually, onset of pruritic, papular rash occurs within a few hours after bathing and may be preceded by a stinging sensation just after exposure. Symptoms are probably due to the host's reaction to the dead and dying schistosomulae and may persist for several days but always resolve spontaneously. Treatment with antihistamines or antipruritics may provide relief.

Katayama syndrome (acute schistosomiasis), as described in the second outbreak, resulted from infection by *S. mansoni* of man, an appropriate host. The syndrome usually occurs with primary infections by *S. mansoni* and *S. japonicum* but has been reported with heavy secondary infections by these two species and, rarely, with primary *S. hematobium* infections. After single-source exposures, incubation ranges from 2 to 10 weeks; onset of illness corresponds to late maturation of juvenile worms and onset of oviposition (at 4-6 weeks). Since egg excretion in the stool is further delayed, a parasitologic diagnosis of early Katayama syndrome is virtually impossible in all but the few cases with delayed onset.

As with chronic schistosomiasis, severity of Katayama syndrome parallels worm burden (*1*). Unlike chronic schistosomiasis, symptoms often occur with very light infections. Thus, a sensitive stool-concentration technique, such as the MRCT, with examination of the entire sediment from at least 1 gram of stool, is recommended to confirm the diagnosis. While safe and effective schistosomocidal drugs are now available, they lack evaluation in prepatent schistosomiasis.

In the cercarial dermatitis outbreak, the demonstration of infected snails at the suspected site of exposure was convincing evidence for that diagnosis, as well as for incrimination of the river as the first source of that type of infection documented in California. In the Katayama syndrome outbreak, no specific site of infection could be determined. However, natural pools in stream beds used for swimming or bathing have been incriminated previously as sites of infection in Africa and other endemic areas (*2*). In addition to such pools in tributary streams, shallows without appreciable flow in the Omo River may have harbored infected snails; water from the main current of the river is a highly improbable source.

The Katayama syndrome outbreak is by no means unique. The waters of the Mui River were implicated as the source for two previous outbreaks among game park visitors (*3*), and CDC has received anecdotal reports of infected river-rafters from other trips.

Cecarial Dermatitis – Continued

Preventive measures for both syndromes are aimed at preventing penetration by cercariae. Avoiding potentially infected water (including drinking water), although entirely effective, may not be practical. Iodinating (1 part per million for 30 minutes), chlorinating, or heating the water kills the cercariae. Frequent towel drying is effective, but because Katayama syndrome requires only a small worm load, this practice could reduce symptomology without completely preventing disease. Molluscicides are too expensive to be practical, except in the most frequently visited and infected water-contact sites. With the increasing popularity of rafting on African rivers and the unavoidable water contact, in addition to other exposures of tourists to endemic areas, physicians should suspect acute schistosomiasis when they obtain typical clinical evidence and compatible exposure histories. In the United States (except in Puerto Rico), there are no suitable snail hosts for human schistosomes; therefore, only cercarial dermatitis may be acquired.

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TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	32nd Week Ending			Cumulative, First 32 Weeks		
	August 14, 1982	August 15, 1981	Median 1977-1981	August 14, 1982	August 15, 1981	Median 1977-1981
Aseptic meningitis	333	379	230	3,567	3,918	2,818
Brucellosis	4	2	3	98	91	111
Encephalitis: Primary (arthropod-borne & unspec.)	30	36	36	570	614	472
Post-infectious	1	2	4	43	63	139
Gonorrhea: Civilian	17,571	21,097	22,031	556,596	609,452	595,812
Military	600	575	575	15,655	18,000	16,689
Hepatitis: Type A	403	465	554	13,299	15,679	17,472
Type B	452	417	351	12,693	12,540	10,107
Non A, Non B	44	N	N	1,302	N	N
Unspecified	203	229	217	5,541	6,717	6,144
Legionellosis	23	N	N	267	N	N
Leprosy	-	1	3	120	160	107
Malaria	26	34	31	594	884	451
Measles (rubeola)	28	44	203	1,157	2,515	12,868
Meningococcal infections: Total	42	48	45	1,976	2,419	1,837
Civilian	42	48	45	1,964	2,410	1,819
Military	-	-	-	12	9	13
Mumps	24	49	89	4,031	3,062	10,830
Pertussis	63	39	51	759	705	830
Rubella (German measles)	11	11	76	1,879	1,673	10,448
Syphilis (Primary & Secondary): Civilian	690	662	443	19,989	18,411	14,528
Military	10	2	4	257	232	186
Tuberculosis	443	617	617	15,642	16,354	17,077
Tularemia	8	6	6	134	139	117
Typhoid fever	4	9	9	230	307	282
Typhus fever, tick-borne (RMSF)	52	34	60	701	852	759
Rabies, animal	135	153	122	3,837	4,718	3,050

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Utah 1, Calif 1, Hawaii 2)	54	Paralytic	3
Cholera	-	Psittacosis	82
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (Ohio 1, Minn. 1, W.Va. 1, Calif. 1)	48
Leptospirosis	34	Trichinosis	61
Plague (Colo. 2)	10	Typhus fever, flea-borne (endemic, murine) (Ga. 1, Tex. 3)	24

TABLE III. Cases of specified notifiable diseases, United States, weeks ending August 14, 1982 and August 15, 1981 (32nd week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	333	98	570	43	556,596	609,452	403	452	44	203	23	120
NEW ENGLAND	37	3	20	4	13,701	14,962	11	30	-	12	-	1
Maine	3	-	-	-	658	776	3	3	-	-	-	-
N.H.	7	-	1	-	389	543	-	-	-	-	-	-
Vt.	1	-	-	-	259	259	3	-	-	-	-	-
Mass.	16	-	7	-	6,391	6,229	2	10	-	12	-	-
R.I.	4	-	-	-	917	819	-	2	-	-	-	-
Conn.	6	3	12	4	5,087	6,336	3	15	-	-	-	1
MID. ATLANTIC	37	3	61	9	71,526	72,003	52	81	4	18	-	4
Upstate N.Y.	13	3	22	3	11,542	11,933	10	18	1	4	-	1
N.Y. City	2	-	11	-	30,011	29,910	1	7	-	-	-	1
N.J.	15	-	13	-	12,963	13,631	19	27	3	8	-	1
Pa.	7	-	16	6	17,010	16,529	22	29	-	6	-	1
E.N. CENTRAL	45	1	123	10	78,231	91,945	63	55	2	23	18	3
Ohio	15	1	42	4	22,913	30,542	9	23	1	3	3	-
Ind.	4	-	29	3	9,451	8,023	30	14	-	17	-	-
Ill.	-	-	9	1	18,799	25,449	2	3	1	1	-	3
Mich.	24	-	38	-	19,610	19,647	20	14	-	2	14	-
Wis.	2	-	5	2	7,458	8,284	2	1	-	-	1	-
W.N. CENTRAL	12	14	46	3	27,378	28,965	13	18	2	6	-	3
Minn.	2	1	19	1	4,092	4,557	4	5	-	1	-	1
Iowa	-	3	16	1	2,874	3,167	-	5	1	3	-	-
Mo.	6	4	6	-	12,869	13,371	6	8	1	1	-	1
N. Dak.	2	-	-	-	367	393	-	-	-	-	-	-
S. Dak.	-	1	-	1	741	786	2	-	-	-	-	1
Nebr.	-	2	2	-	1,659	2,238	1	-	-	-	-	-
Kans.	2	3	3	-	4,776	4,453	-	-	-	1	-	-
S. ATLANTIC	45	18	98	7	132,017	149,997	36	84	12	25	3	7
Del.	-	-	-	-	2,415	2,374	-	1	-	1	-	-
Md.	4	-	15	-	18,606	17,144	4	22	5	2	-	3
D.C.	-	-	-	-	8,366	8,949	-	2	-	-	-	-
Va.	6	7	20	1	12,372	13,478	1	12	2	1	1	1
W. Va.	3	-	4	-	1,675	2,244	1	1	2	-	-	-
N.C.	15	-	11	1	24,084	23,156	4	10	-	15	-	-
S.C.	1	2	-	-	14,694	14,460	2	10	-	1	-	-
Ga.	-	1	8	-	9,483	30,912	U	U	U	U	2	-
Fla.	16	8	40	5	40,322	37,280	24	26	3	5	-	3
E.S. CENTRAL	11	11	32	2	49,640	50,962	14	26	2	5	1	-
Ky.	3	-	-	-	6,674	6,389	2	3	-	2	1	-
Tenn.	1	6	15	-	19,311	19,046	9	13	1	2	-	-
Ala.	7	4	12	2	14,920	15,626	3	9	1	1	-	-
Miss.	-	1	5	-	8,735	9,901	-	1	-	-	-	-
W.S. CENTRAL	69	25	72	1	80,161	80,646	70	41	-	60	-	18
Ark.	-	4	3	-	6,496	5,870	3	-	-	7	-	-
La.	3	6	10	-	15,018	13,546	9	2	-	1	-	-
Okla.	1	4	18	-	8,843	8,580	14	13	-	5	-	-
Tex.	65	11	41	1	49,804	52,650	44	26	-	47	-	18
MOUNTAIN	31	-	19	3	19,702	23,729	46	23	4	12	1	2
Mont.	1	-	-	-	806	872	-	1	-	-	-	-
Idaho	1	-	-	-	911	1,072	-	1	-	-	-	1
Wyo.	-	-	-	-	585	553	-	-	-	-	-	-
Colo.	9	-	9	1	5,236	6,398	10	5	1	1	-	-
N. Mex.	1	-	-	-	2,564	2,589	13	4	-	3	-	-
Ariz.	-	-	6	-	5,309	7,139	18	8	3	4	-	-
Utah	18	-	-	2	938	1,120	2	4	-	4	1	1
Nev.	1	-	4	-	3,353	3,986	3	-	-	-	-	-
PACIFIC	46	23	99	4	84,240	96,243	98	94	18	42	-	82
Wash.	2	-	9	-	7,020	7,883	8	13	4	1	-	7
Oreg.	3	-	3	-	4,796	5,654	7	4	-	-	-	1
Calif.	36	22	83	4	68,847	78,370	83	72	14	41	-	52
Alaska	3	1	3	-	2,053	2,418	-	3	-	-	-	1
Hawaii	2	-	1	-	1,524	1,918	-	2	-	-	-	21
Guam	U	-	-	-	72	77	U	U	U	U	U	-
P.R.	2	-	1	-	1,722	1,992	2	2	-	3	-	-
V.I.	-	-	-	-	142	124	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	187	279	U	U	U	U	U	10

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 14, 1982 and August 15, 1981 (32nd week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	26	594	28	1,157	2,515	42	1,976	24	4,031	63	11	1,879	1,673
NEW ENGLAND	2	32	1	10	75	2	104	4	166	-	1	18	111
Maine	-	-	-	-	5	1	7	1	36	-	-	-	33
N.H.	1	1	-	2	6	-	14	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	-	7	-	-	-	-
Mass.	-	21	1	3	54	-	27	3	81	-	1	6	23
R.I.	-	2	-	-	-	-	11	-	14	-	-	1	-
Conn.	1	8	-	3	8	1	39	-	16	-	-	3	12
MID. ATLANTIC	6	85	3	156	802	12	356	1	252	13	1	91	196
Upstate N.Y.	-	20	3	110	205	4	126	1	55	1	1	44	90
N.Y. City	2	26	-	38	69	-	59	-	42	-	-	31	49
N.J.	1	23	-	4	54	1	74	-	36	-	-	16	46
Pa.	3	16	-	4	474	7	97	-	119	12	-	-	11
E.N. CENTRAL	-	37	4	71	77	3	234	3	2,137	8	2	156	351
Ohio	-	9	-	1	15	-	87	2	1,554	4	-	-	3
Ind.	-	1	-	2	8	-	22	-	37	-	-	26	122
Ill.	-	4	-	23	23	-	63	-	168	-	-	55	85
Mich.	-	21	4	45	30	3	50	-	294	-	1	48	34
Wis.	-	2	-	-	1	-	12	1	84	4	1	27	107
W.N. CENTRAL	2	17	-	49	10	1	87	2	541	4	-	58	76
Minn.	-	2	-	-	3	-	21	2	416	4	-	8	7
Iowa	-	5	-	-	1	-	5	-	30	-	-	-	4
Mo.	1	5	-	2	1	1	26	-	15	-	-	38	2
N. Dak.	1	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	11	-	-	-	-	-	1
Kans.	-	1	-	44	1	-	14	-	79	-	-	11	62
S. ATLANTIC	5	93	-	36	349	9	395	3	230	7	-	69	127
Del.	1	4	-	-	-	-	-	-	10	-	-	1	1
Md.	2	14	-	2	4	1	25	1	24	3	-	33	1
D.C.	-	3	-	1	1	-	2	-	-	-	-	-	-
Va.	1	27	-	14	6	1	46	-	32	1	-	14	5
W. Va.	-	6	-	2	9	-	8	2	85	-	-	1	22
N.C.	-	3	-	-	3	-	76	-	11	2	-	1	5
S.C.	-	4	-	-	2	1	47	-	13	-	-	1	8
Ga.	1	12	-	-	108	-	81	-	11	-	-	6	35
Fla.	-	20	-	17	216	6	110	-	44	1	-	12	50
E.S. CENTRAL	-	7	-	8	5	3	129	1	39	2	-	43	27
Ky.	-	4	-	1	1	1	21	-	12	-	-	25	18
Tenn.	-	-	-	6	2	2	55	1	15	2	-	2	8
Ala.	-	-	-	-	2	-	45	-	6	-	-	-	1
Miss.	-	3	-	1	-	-	8	-	6	-	-	16	-
W.S. CENTRAL	1	45	4	34	824	6	234	4	161	5	1	100	138
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	3
La.	-	3	-	2	2	-	42	-	5	-	-	1	9
Okla.	-	6	4	16	5	1	25	-	-	-	-	3	-
Tex.	1	33	-	16	816	5	155	4	150	5	1	95	126
MOUNTAIN	-	17	2	8	33	1	96	-	74	7	3	74	80
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	3	-	6	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	7
Colo.	-	8	1	6	9	-	41	-	14	-	-	6	30
N. Mex.	-	2	-	-	8	-	14	-	-	-	-	5	5
Ariz.	-	3	1	2	5	1	16	-	33	4	2	14	19
Utah	-	2	-	-	-	-	8	-	14	-	-	20	4
Nev.	-	-	-	-	10	-	2	-	5	-	1	11	9
PACIFIC	10	261	14	785	340	5	341	6	431	17	3	1,270	567
Wash.	1	14	-	32	3	-	36	-	61	1	-	37	88
Oreg.	-	9	-	15	3	2	67	-	-	-	-	6	49
Calif.	9	236	14	733	332	3	225	6	356	2	3	1,214	415
Alaska	-	-	-	1	-	-	10	-	6	-	-	5	1
Hawaii	-	2	-	4	2	-	3	-	8	14	-	8	14
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	2	83	258	-	7	1	47	1	-	7	3
V.I.	-	-	-	-	24	-	-	-	1	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	-	U	1	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 14, 1982 and August 15, 1981 (32nd week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	19,969	18,411	443	15,642	134	4	230	52	701	3,837
NEW ENGLAND	337	375	5	412	2	-	14	-	7	28
Maine	1	2	1	34	-	-	-	-	-	20
N.H.	1	12	1	12	-	-	-	-	1	-
Vt.	1	13	-	9	-	-	2	-	-	-
Mass.	229	251	3	274	2	-	10	-	3	4
R.I.	17	21	-	17	-	-	-	-	2	-
Conn.	88	76	-	86	-	-	2	-	1	4
MID. ATLANTIC	2,756	2,733	62	2,628	7	1	35	-	27	112
Upstate N.Y.	267	248	16	458	7	1	6	-	9	56
N.Y. City	1,663	1,638	19	958	-	-	20	-	1	-
N.J.	373	375	8	529	-	-	5	-	11	8
Pa.	453	472	19	683	-	-	4	-	6	48
E.N. CENTRAL	1,067	1,260	79	2,400	1	2	19	4	65	431
Ohio	196	167	12	414	-	-	8	3	60	61
Ind.	117	122	4	310	-	-	-	-	-	65
Ill.	514	693	29	988	-	-	3	1	5	220
Mich.	179	219	29	557	-	1	7	-	-	4
Wis.	61	59	5	131	1	1	1	-	-	81
W.N. CENTRAL	355	378	17	455	18	-	8	1	20	858
Minn.	67	134	1	77	-	-	5	-	-	151
Iowa	18	14	1	50	1	-	1	-	4	271
Mo.	215	200	12	217	12	-	1	1	7	78
N. Dak.	7	7	1	9	-	-	-	-	-	75
S. Dak.	1	2	-	19	-	-	-	-	3	71
Nebr.	11	5	-	20	2	-	-	-	1	100
Kans.	36	16	2	63	3		1	-	5	112
S. ATLANTIC	5,439	4,860	98	3,216	10	-	34	33	396	668
Del.	9	7	-	26	-	-	-	-	-	2
Md.	289	373	-	364	1	-	9	2	40	33
D.C.	306	389	9	130	-	-	-	-	-	-
Va.	377	431	18	361	2	-	3	9	60	339
W. Va.	20	15	1	100	-	-	3	1	7	34
N.C.	405	369	16	518	-	-	-	11	172	47
S.C.	317	319	7	294	6	-	3	6	87	37
Ga.	1,115	1,252	15	483	-	-	-	4	28	133
Fla.	2,601	1,706	32	940	1	-	16	-	2	43
E.S. CENTRAL	1,390	1,209	43	1,463	6	-	14	4	54	452
Ky.	76	67	14	375	-	-	-	-	-	93
Tenn.	371	448	20	485	4	-	2	2	35	273
Ala.	514	340	9	416	-	-	9	1	7	84
Miss.	429	354	-	187	2	-	3	1	12	2
W.S. CENTRAL	5,189	4,461	52	1,882	67	1	24	10	119	743
Ark.	130	83	9	203	42	-	2	-	20	102
La.	1,172	1,062	10	296	3	-	3	-	-	22
Okla.	114	103	11	247	21	-	2	8	63	139
Tex.	3,773	3,213	22	1,136	1	1	17	2	36	480
MOUNTAIN	504	468	16	439	17	-	10	-	9	152
Mont.	3	11	1	27	2	-	-	-	2	56
Idaho	22	17	1	23	1	-	-	-	2	6
Wyo.	14	7	-	2	1	-	-	-	1	13
Colo.	142	146	-	46	3	-	3	-	1	24
N. Mex.	115	88	-	84	1	-	-	-	1	11
Ariz.	115	105	14	190	-	-	5	-	-	32
Utah	15	17	-	25	9	-	1	-	-	7
Nev.	78	77	-	42	-	-	1	-	2	3
PACIFIC	2,932	2,667	71	2,747	6	-	72	-	4	393
Wash.	100	103	3	174	1	-	3	-	-	3
Oreg.	70	59	8	116	-	-	2	-	1	1
Calif.	2,679	2,450	55	2,213	4	-	64	-	3	314
Alaska	8	10	-	57	1	-	1	-	-	75
Hawaii	76	45	5	187	-	-	2	-	-	-
Guam	1	-	U	8	-	U	-	U	-	-
P.R.	369	414	5	239	-	-	2	-	-	32
V.I.	17	13	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	68	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending August 14, 1982 (32nd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	638	426	152	30	17	13	45
Boston, Mass	178	107	41	11	11	8	15
Bridgeport, Conn	41	29	8	3	1	-	1
Cambridge, Mass	28	19	6	3	-	-	4
Fall River, Mass	30	23	7	-	-	-	-
Hartford, Conn	70	53	11	3	2	1	7
Lowell, Mass	21	16	3	2	-	-	1
Lynn, Mass	20	13	7	-	-	-	-
New Bedford, Mass	25	21	4	-	-	-	1
New Haven, Conn	48	27	16	2	3	-	2
Providence, R.I	41	24	12	2	-	3	4
Somerville, Mass	8	5	3	-	-	-	-
Springfield, Mass	34	21	11	1	-	1	2
Waterbury, Conn	30	20	9	1	-	-	4
Worcester, Mass	64	48	14	2	-	-	4
MID. ATLANTIC	2,473	1,585	565	182	61	78	90
Albany, N.Y	46	27	11	2	2	4	1
Allentown, Pa	15	13	2	-	-	-	-
Buffalo, N.Y	126	74	36	8	4	4	7
Camden, N.J	37	18	15	2	1	1	2
Elizabeth, N.J	12	10	2	-	-	-	1
Erie, Pa †	33	20	10	2	-	1	3
Jersey City, N.J	42	30	7	3	-	2	1
N.Y. City, N.Y	1,340	863	296	104	33	44	44
Newark, N.J	59	25	13	13	2	4	2
Paterson, N.J	20	14	3	3	-	-	2
Philadelphia, Pa †	252	151	58	25	8	10	12
Pittsburgh, Pa †	65	40	19	5	-	1	3
Reading, Pa	34	26	7	1	-	-	4
Rochester, N.Y	130	93	25	5	2	5	3
Schenectady, N.Y	27	19	6	1	-	1	1
Scranton, Pa †	27	15	9	1	2	-	-
Syracuse, N.Y	126	84	29	6	7	-	-
Trenton, N.J	24	16	6	1	-	1	1
Utica, N.Y	25	21	4	-	-	-	2
Yonkers, N.Y	33	26	7	-	-	-	1
E.N. CENTRAL	2,146	1,275	543	164	97	67	38
Akron, Ohio	93	61	16	8	5	3	-
Canton, Ohio	27	16	10	1	-	-	-
Chicago, Ill	489	283	124	55	18	9	11
Cincinnati, Ohio	136	78	41	3	4	10	3
Cleveland, Ohio	144	89	31	7	10	7	1
Columbus, Ohio	140	69	46	12	8	5	3
Dayton, Ohio	106	70	25	6	5	-	1
Detroit, Mich	257	125	79	23	19	11	2
Evansville, Ind	32	24	7	-	1	-	-
Fort Wayne, Ind	50	36	8	4	2	-	2
Gary, Ind	13	4	3	4	2	-	-
Grand Rapids, Mich	33	26	5	1	1	-	1
Indianapolis, Ind	173	100	45	16	6	6	-
Madison, Wis	37	21	9	3	2	2	1
Milwaukee, Wis	102	67	23	2	4	6	2
Peoria, Ill	29	16	8	1	3	1	2
Rockford, Ill	39	24	11	2	-	2	4
South Bend, Ind	49	41	4	2	-	2	3
Toledo, Ohio	136	82	36	11	4	2	2
Youngstown, Ohio	62	43	12	3	3	1	-
W.N. CENTRAL	720	502	134	35	31	17	27
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn	23	17	4	1	1	-	4
Kansas City, Kans	28	20	6	1	1	-	-
Kansas City, Mo	102	74	19	4	4	1	2
Lincoln, Nebr	39	24	11	1	-	3	3
Minneapolis, Minn	88	58	16	4	7	3	2
Omaha, Nebr	92	64	19	3	2	4	3
St. Louis, Mo	165	98	41	12	10	4	5
St. Paul, Minn	68	58	9	-	1	-	4
Wichita, Kans	62	38	9	9	4	2	4
S. ATLANTIC	1,347	778	327	117	58	65	37
Atlanta, Ga	116	52	37	10	8	9	6
Baltimore, Md	321	182	87	22	16	14	6
Charlotte, N.C	61	29	18	4	6	4	3
Jacksonville, Fla	101	63	22	7	3	6	5
Miami, Fla	125	70	29	16	5	5	3
Norfolk, Va	57	29	14	10	-	4	2
Richmond, Va	83	50	21	7	1	4	1
Savannah, Ga	41	24	11	5	1	-	3
St. Petersburg, Fla	83	67	8	1	6	1	1
Tampa, Fla	73	48	12	6	3	4	4
Washington, D.C	231	127	58	25	8	13	1
Wilmington, Del	55	37	12	4	1	1	2
E.S. CENTRAL	691	400	180	49	28	33	17
Birmingham, Ala	95	52	27	4	8	4	2
Chattanooga, Tenn	62	37	18	5	-	2	2
Knoxville, Tenn	48	32	13	2	-	1	1
Louisville, Ky	116	71	33	7	3	1	6
Memphis, Tenn	159	88	37	14	7	13	-
Mobile, Ala	80	42	21	7	6	4	1
Montgomery, Ala	27	15	10	2	-	-	3
Nashville, Tenn	104	63	21	8	4	8	2
W.S. CENTRAL	1,212	678	318	86	63	67	24
Austin, Tex	57	37	8	6	4	2	-
Baton Rouge, La	32	23	7	1	-	1	1
Corpus Christi, Tex	33	23	5	2	3	-	-
Dallas, Tex	186	104	55	11	9	7	1
El Paso, Tex	53	33	16	2	2	-	5
Fort Worth, Tex	74	43	25	-	2	4	2
Houston, Tex	300	146	76	37	22	19	5
Little Rock, Ark	64	38	15	1	3	7	1
New Orleans, La	127	72	34	9	6	6	-
San Antonio, Tex	155	84	42	8	9	12	5
Shreveport, La	46	25	15	1	2	3	-
Tulsa, Okla	85	50	20	8	1	6	4
MOUNTAIN	572	347	135	36	35	19	15
Albuquerque, N.Mex	62	40	11	4	2	5	2
Colo. Springs, Colo	37	24	9	2	1	1	1
Denver, Colo	108	69	24	9	6	-	2
Las Vegas, Nev	58	31	18	6	3	-	4
Ogden, Utah	15	9	4	1	-	1	1
Phoenix, Ariz	146	87	33	9	11	6	1
Pueblo, Colo	17	9	6	1	1	-	1
Salt Lake City, Utah	55	32	13	2	4	4	-
Tucson, Ariz	74	46	17	2	7	2	3
PACIFIC	1,563	993	335	120	53	61	81
Berkeley, Calif	11	8	2	-	1	-	-
Fresno, Calif	60	31	10	11	3	5	5
Glendale, Calif	20	15	5	-	-	-	-
Honolulu, Hawaii	52	30	14	2	2	4	2
Long Beach, Calif	86	48	25	11	1	1	4
Los Angeles, Calif	421	281	78	29	18	15	22
Oakland, Calif	62	43	12	2	1	4	-
Pasadena, Calif	34	29	2	1	-	2	2
Portland, Oreg	116	80	24	3	2	7	6
Sacramento, Calif	71	38	19	5	5	4	3
San Diego, Calif	118	70	28	10	4	6	12
San Francisco, Calif	154	90	32	22	3	6	5
San Jose, Calif	150	87	38	13	8	4	12
Seattle, Wash	127	92	22	8	3	2	5
Spokane, Wash	49	29	16	1	2	1	1
Tacoma, Wash	32	22	8	2	-	-	2
TOTAL	11,362††	6,984	2,689	819	443	420	374

---

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Tuberculosis — United States, 1981

During 1981, 27,373 cases of tuberculosis were reported to CDC; the case rate was 11.9 per 100,000 population, a decrease of 1.4% in the number of cases reported and 3.3% in the case rate from 1980 (Table 1).

Case rates for the 50 states ranged from 20.1 per 100,000 in Alaska to 1.1 per 100,000 in Idaho. In 21 states, 1981's tuberculosis rate was ≥ 1980's, while for 29 states and the District of Columbia, it was lower (Figure 1). The rate for California has risen during each of the past 3 years; the rates for Kansas and South Carolina have risen during each of the past 2 years.

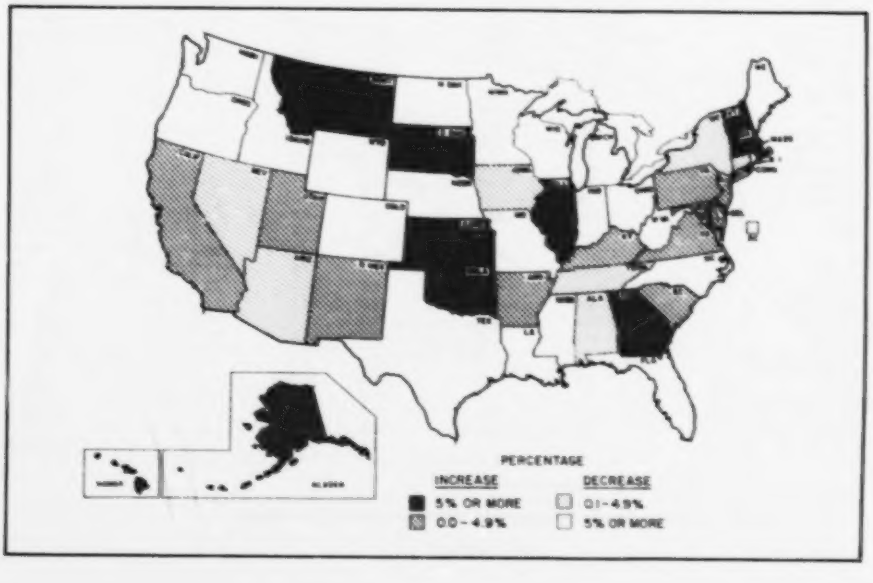
Case rates were higher in the southern half of the country (Figure 2) and in the major cities. In 56 cities with a population ≥250,000, the rate was 23.3 per 100,000 population—twice the national rate. Miami, Florida, had a rate of 87.0 per 100,000 in 1981, the highest for any major city since 1977; Omaha-Douglas County, Nebraska, had the lowest rate (3.8 per 100,000).

Reported by Tuberculosis Control Div, Center for Prevention Svcs, CDC.

Editorial Note: During the past 3 years, no substantial decline has occurred in the number of tuberculosis cases in the United States. From 1968 through 1978, the number decreased by an average of 5.6% per year; during the past 3 years, the average decline has been 1.4%. Surveys show that cases among newly arrived Indochinese refugees largely accounted for the leveling off of the decline during 1979 and

(Continued on page 446)

FIGURE 1. Change in percentage of tuberculosis case rates by state, United States, 1980-1981



Tuberculosis – Continued

TABLE 1. Tuberculosis cases and case rates by state, 1981 and 1980

State	Tuberculosis Cases 1981	Tuberculosis Cases 1980	Case Rate 1981	Case Rate 1980	Rank According to Rate 1981	Rank According to Rate 1980	Population July 1, 1981
United States	27,373	27,749	11.9	12.3	–	–	229,307,000
Alabama	640	663	16.3	17.0	9	6	3,917,000
Alaska	83	76	20.1	19.0	1	1	412,000
Arizona	342	342	12.2	12.6	21	19	2,794,000
Arkansas	381	369	16.6	16.1	7	9	2,296,000
California	4,520	4,279	18.7	18.1	3	4	24,196,000
Colorado	122	135	4.1	4.7	44	43	2,965,000
Connecticut	171	173	5.5	5.6	34	38	3,134,000
Delaware	71	76	11.9	12.8	22	17	598,000
District of Columbia*	239	341	37.9	53.5	–	–	631,000
Florida	1,553	1,647	16.3	16.9	12	7	10,183,000
Georgia	928	849	16.6	15.5	6	11	5,574,000
Hawaii	197	127	20.1	13.2	2	15	981,000
Idaho	11	33	1.1	3.5	50	46	959,000
Illinois	1,528	1,352	13.3	11.8	15	22	11,462,000
Indiana	374	429	6.8	7.8	32	32	5,468,000
Iowa	88	91	3.0	3.1	47	48	2,899,000
Kansas	120	108	5.0	4.6	38	44	2,383,000
Kentucky	596	570	16.3	15.6	10	10	3,662,000
Louisiana	534	577	12.4	13.7	18	14	4,308,000
Maine	52	58	4.6	5.2	41	41	1,133,000
Maryland	621	610	14.6	14.5	13	13	4,263,000
Massachusetts	504	452	8.7	7.9	29	31	5,773,000
Michigan	931	1,168	10.1	12.6	24	18	9,204,000
Minnesota	188	237	4.6	5.8	40	36	4,094,000
Mississippi	401	458	15.8	18.2	11	2	2,531,000
Missouri	431	466	8.7	9.5	30	27	4,941,000
Montana	35	27	4.4	3.4	42	47	793,000
Nebraska	32	44	2.0	2.8	49	49	1,577,000
Nevada	45	44	5.3	5.5	35	39	845,000
New Hampshire	34	22	3.6	2.4	46	50	936,000
New Jersey	927	906	12.5	12.3	17	20	7,404,000
New Mexico	152	146	11.4	11.2	23	23	1,328,000
New York	2,223	2,294	12.6	13.1	16	16	17,602,000
North Carolina	981	1,066	16.5	18.1	8	3	5,953,000
North Dakota	31	54	4.7	8.3	39	30	658,000
Ohio	657	747	6.1	6.9	33	35	10,781,000
Oklahoma	381	333	12.3	11.0	20	24	3,100,000
Oregon	206	218	7.8	8.3	31	29	2,651,000
Pennsylvania	1,048	1,015	8.8	8.6	28	28	11,871,000
Rhode Island	49	66	5.1	7.0	37	34	953,000
South Carolina	541	520	17.1	16.7	4	8	3,167,000
South Dakota	66	49	9.6	7.1	25	33	686,000
Tennessee	778	791	16.9	17.2	5	5	4,612,000
Texas	2,015	2,075	13.6	14.6	14	12	14,766,000
Utah	64	61	4.2	4.2	43	45	1,518,000
Vermont	27	25	5.2	4.9	36	42	516,000
Virginia	670	654	12.3	12.2	19	21	5,430,000
Washington	401	424	9.5	10.3	26	26	4,217,000
West Virginia	181	203	9.3	10.4	27	25	1,952,000
Wisconsin	192	252	4.0	5.4	45	40	4,742,000
Wyoming	11	27	2.2	5.7	48	37	492,000
American Samoa†	6	2	18.1	6.2	–	–	33,130
Guam†	47	55	44.4	52.0	–	–	105,821
Northern Mariana Is.†	26		154.2	.	–	–	16,862
Puerto Rico†	553	820	17.3	25.7	–	–	3,196,520
Trust Terr Pacific Is.†	86	101††	73.5	75.5††	–	–	116,974
U.S. Virgin Is.†	4	8	3.3	8.4	–	–	120,000

*District of Columbia is not ranked with the states but is included in totals.

†Not included in totals.

††Cases and case rate for Trust Territory of the Pacific Islands for 1980 included Northern Mariana Islands.

(–) Not ranked.

( ) Not available.

Tuberculosis – Continued

FIGURE 2. Tuberculosis case rates by state, United States, 1981

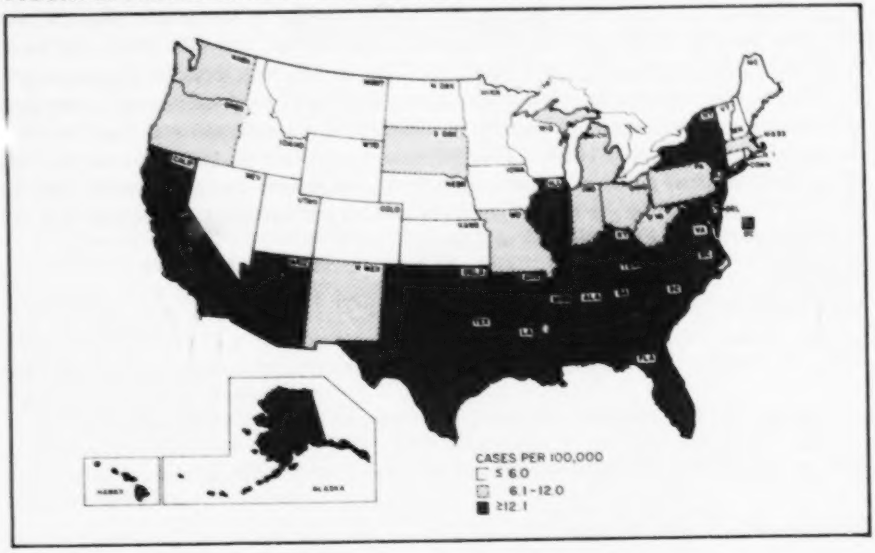
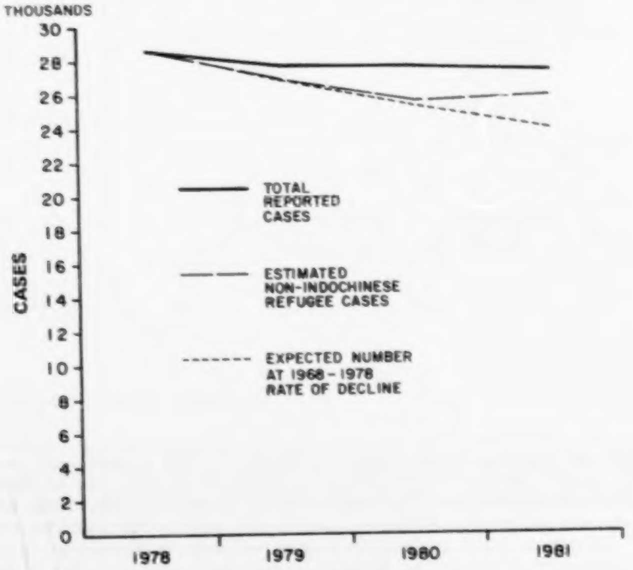

HAWAII
ALASKA
CASES PER 100,000
☐ ≤ 6.0
▨ 6.1-12.0
■ ≥12.1

FIGURE 3. Tuberculosis cases by year, United States, 1978-1981



Tuberculosis – Continued

1980 (*1*). A similar survey has not been done for 1981, but based on data from 14 states (Colorado, Connecticut, Florida, Illinois, Kansas, Maine, Minnesota, Mississippi, Missouri, Nevada, Oklahoma, South Carolina, Washington, and Wisconsin) and two large cities (Washington, DC, and New York City), all of which reported the countries of origin of tuberculosis patients in 1981, it is estimated that Indochinese refugees accounted for fewer cases in 1981 than in 1980. This is consistent with the fact that fewer refugees arrived in 1981 (121,959) than in 1980 (155,158). The number of cases among other persons in the United States increased slightly from 25,569 to 25,841 (Figure 3). There is no evidence that this slight increase has been caused by transmission from the Indochinese refugees.

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The Morbidity and Mortality Weekly Report, circulation 111,113, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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CENTERS FOR DISEASE CONTROL
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August 27, 1982 / Vol. 31 / No. 33

449 Enteric Illness Associated with Raw Clam Consumption – New York
451 Employee Illness from Underground

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Epidemiologic Notes and Reports

Enteric Illness Associated with Raw Clam Consumption — New York

Since June 1, 1982, the New York State Health Department has received reports of at least 14 separate outbreaks of gastroenteritis associated with consumption of raw clams. Approximately 150 persons have been affected. Typical symptoms have included diarrhea and abdominal cramps beginning 12-72 hours after eating clams, with nausea, vomiting, and fever occurring less often. In three of these outbreaks, seven individuals subsequently developed hepatitis A 21-37 days after eating clams. Three other persons developed hepatitis A without initial gastrointestinal symptoms. Eight of the 10 cases were verified by the presence of IgM antibody to hepatitis A virus (HAV); results on the others are pending.

A summary of four of these outbreaks follows:

Outbreak A: On May 29, 24 individuals attended a private party in Albany County at which raw clams were served. Within 6-24 hours, 18 (90%) of 20 persons who had eaten clams developed diarrhea and abdominal cramps, which lasted 1-3 days. None of four persons who remained well had consumed clams. Stool specimens obtained shortly after onset of illness from seven persons with gastroenteritis were negative for *Salmonella*, *Shigella*, and *Campylobacter*. Two persons who ate clams and developed gastroenteritis contracted hepatitis A 21 and 27 days later. Clams from the same lot as those consumed at the party were evaluated at the New York State Health Department's laboratory. Although cultures of extracts from these clams did not grow enteric bacterial pathogens, both 27 nm and 40 nm virus-like particles were observed by electron microscopy.

Outbreak B: On May 30, fourteen people attended a private party in Rensselaer County at which clams were served. Five (83%) of six persons who ate raw clams developed diarrhea, nausea, vomiting, and abdominal cramps 36-72 hours later; symptoms persisted for 1-2 days. None of the eight persons who did not eat raw clams became ill. One of the five individuals with gastroenteritis, who worked as a food handler, developed hepatitis A (confirmed by the presence of HAV-specific IgM antibody) 34 days after eating clams, prompting county health officers to administer immunoglobulin (IG) as a preventive measure to 850 people exposed to foods he had prepared.

Outbreak C: On June 5, members of multiple bowling leagues attended a picnic in Albany County. Many of the approximately 200 attendees developed diarrhea, nausea, vomiting, and abdominal cramps 12-72 hours after the event. Forty-five of 126 persons interviewed reported gastroenteritis; 42 (89%) of these had eaten raw clams. Only raw clams were significantly associated with illness ($p < 0.001$). Four persons who consumed clams and were affected by gastroenteritis developed hepatitis A 29-37 days later. This outbreak was not recognized in time to obtain specimens from persons with acute gastrointestinal illness.

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Enteric Illness – Continued

Outbreak D: On July 11, 11 persons attended a party in Schenectady County at which raw clams were served. All seven individuals who ate clams developed diarrhea and abdominal cramps 15-60 hours later; none had fever or vomiting. Diarrhea persisted for up to 1 week in several persons. None of four persons who did not eat clams became ill. Thus, clams were epidemiologically implicated as the vehicle of transmission. Stool samples from five ill individuals were negative for enteric bacterial pathogens (*Salmonella, Shigella, Vibrio, Campylobacter*, and *Yersinia*). Examination of stools for virus is pending.

Inadequate or absent tagging of the clams implicated in these outbreaks has made it difficult to accurately determine the clams' source. However, current information indicates clams responsible for the outbreaks originated in coastal waters from at least three states: Massachusetts, New York, and Rhode Island. The timing of these outbreaks may be related to contamination of harvesting beds by the heavy rains and subsequent runoff that occurred in the Northeast during May and early June. Preliminary data from New York and Rhode Island indicate an increase in coliform counts in clam-harvesting waters monitored during this time.

Since December 1981, the New York State Department of Health has been informed of 33 outbreaks of clam-related illness involving more than 250 cases of gastroenteritis and 20 cases of hepatitis A. One county where clams are harvested has noted a two-fold increase in reported cases of hepatitis A for the first 6 months of this year compared with the same period last year (60 in 1982 vs 31 in 1981); 45% of the 1982 patients had histories of clam consumption consistent with the incubation period of hepatitis A. An intensive evaluation of 1,559 food establishments, conducted between July 22 and July 29, revealed that 125 (14%) of 908 that stock shellfish sold clams that were untagged or improperly certified (to identify their waters of origin).

Because these outbreaks suggested a recent problem of clam contamination, New York State Health Department officials currently advise individuals to refrain from eating raw clams. In addition, they advise giving IG to persons involved in clam-associated outbreaks of gastroenteritis, provided it can be administered within 2 weeks of clam consumption.

Reported by L Lanzillo, J Reid, MD, Rensselaer County Health Dept, S Cobb, M DiManno, E Podgorski, J Lyons, MD, Albany County Health Dept, D Greenstein, N Maher, N Schell, MD, V Tulumello, Nassau County Health Dept, D Klotz, H Foust, Schenectady County Health Dept, L Bonser, J Debbie, DVM, R Deibel, MD, B Fear, J Guzewich, K Henry, J Raucci, I Loudon, MD, D Morse, MD, J Pert, MD, M Shayegani, PhD, P Smith, A Squire, R Stricof, R Svenson, R Rothenberg, MD, State Epidemiologist, New York State Health Dept; Div of Hepatitis and Viral Enteritis, Center for Infectious Diseases, Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: Ingestion of shellfish has been known for over 50 years to cause outbreaks of bacterial and viral enteric diseases (*1*). Typhoid fever (*2*), hepatitis A (*3,4*), cholera (*5*), and *Vibrio parahaemolyticus* (*6*) have long been associated with ingestion of raw clams and oysters. More recently, raw shellfish contaminated with non-O1 *V. cholerae* (*7*) and Norwalk virus (*8,9*) have also been reported as causes of gastroenteritis outbreaks. Although gastroenteritis (due to bacterial pathogens) and hepatitis A have recently been reported among persons drinking contaminated water (*10*), this is the first report in several years of outbreaks of these illnesses occurring jointly after shellfish consumption (*11,12*). *Viral* gastroenteritis in association with hepatitis A is not known to have been reported following shellfish consumption. The clinical findings observed in several of the New York outbreaks are compatible with a viral etiology, such as the Norwalk virus: a short incubation period, abrupt onset of upper and/or lower gastrointestinal illness, and brief duration (1-2 days). The absence of bacterial pathogens and the visualization of virus-like particles in clams from one outbreak further support a viral etiology in several of these outbreaks.

Enteric Illness – Continued

The recent New York State outbreaks may be related to periods of heavy rain and flooding. Run-off at these times, especially when sewage systems overflow, characteristically increases coliform counts in monitored coastal waters. However, the numerous outbreaks in New York before the May-June flooding suggest an endemic degree of clam contamination, some of which may be attributable to harvesting from uncertified, sewage-contaminated waters. This practice is likely to continue, because taking clams from highly populated, polluted beds is economically profitable and difficult to prevent. These outbreaks emphasize that clams may contain multiple enteric pathogens, including viruses, and consumption of clams—especially raw or partially cooked—continues to pose substantial risk of transmitting disease. Although the most effective way of avoiding the problem is to prevent the distribution of illegally gathered, untagged clams, such measures are not always possible. Therefore, because steaming or other forms of cooking do not always kill the enteric viruses in clams (*13,14*), the most effective means of preventing clam-associated illness is to adequately depurate them.

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Employee Illness from Underground Gas and Oil Contamination — Idaho

The National Institute for Occupational Safety and Health (NIOSH) recently completed an evaluation of an office building in Boise, Idaho, in which workers were experiencing symptoms of headache and nausea related to intermittent noxious odors (*1*). The cause of the problem was gasoline vapors entering the building from an underground aquifer contaminated with petroleum products leaking from a nearby oil storage tank.

The affected employees worked in the basement of a five-story medical office building and had been experiencing the symptoms—which in one case included vomiting—intermittently for 10 months. The symptoms were occasionally associated with a petroleum odor that the

Gas and Oil Contamination – Continued

NIOSH investigator found coming through cracks in the floor and the joints at which the floor met the foundation and the support pillars connected to the floor. Laboratory analysis confirmed the source of the odor as gasoline. The vapor concentrations at the cracks and inside one wall were above the lower explosive limit for gasoline of 14,000 ppm, and the vapor concentrations in the rooms ranged up to 280 ppm.

To determine the source of the contamination, six test holes were drilled around the building. A water sample from one of these holes had petroleum products floating on the surface. An evaluation has determined a large gas and oil tank farm, located two blocks from the building, is the source of the water table contaminants.

Based on recommendations by the NIOSH investigator, immediate steps were taken to correct the hazards. All accessible cracks and joints have been sealed, and the building ventilation system has been adjusted to pressurize the building relative to the outside air. Since these corrections were made, petroleum-product vapors are no longer detectable, and the employees' symptoms have ceased.

Reported by the Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH Region X, CDC.

Editorial Note: The employees' symptoms are consistent with the gasoline vapor concentrations found in the building and with the higher concentrations that probably existed intermittently in the past.

NIOSH has evaluated or is currently evaluating over 100 complaints of various symptoms among office employees. Although a large majority of these evaluations have found that the complaints derive from inadequate office ventilation, occasionally symptoms can be linked to substances measured in the environment, e.g., fibrous glass (*2*), fumes from spirit duplicators (*3*), and emissions from urea-formaldehyde foam insulation (*4*). In the Idaho situation, prompt correction was required to prevent a possible explosion of gasoline vapors. Although such situations are unusual, building occupants in areas near petroleum storage facilities (including gasoline service stations) should be alert to the possibility of environmental contamination—particularly of the water table by petroleum products.

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International Notes

Yellow Fever Surveillance — Africa

The epidemics of yellow fever (YF) in Africa in recent years have stimulated research on the survival mechanisms of the YF virus during interepidemic phases. Virologic surveillance in West and Central Africa has led to the isolation of numerous YF virus strains, particularly from *Aedes africanus, A. opok, A. furcifertaylori,* and *A. luteocephalus,* outside of any declared epidemic. Forest-savanna mosaics, undifferentiated savannas of relatively moist type, differentiated

Yellow Fever – Continued

savannas with abundant *Isoberlinia*, and equatorial moist forest belong to the "endemic area" in which the primary sylvatic circulation of YF virus can occur. In these transitional savannas, the circulation of YF virus fluctuates, giving way to intense epizootics that favor sporadic human infection. The term "emergence zone" has been suggested to designate this geographic belt of major epidemiologic importance. The "epidemic area," which generally seems to be inaccessible to primary sylvatic YF virus circulation, stretches beyond the limits of the emergence zone. Here, YF virus can occasionally be introduced by viremic humans and the threat of major epidemics is maximal. The emergence zone is probably the main source of initial contaminations. Certain outbreaks occurring on the southern border of the epidemic area (such as in Gambia in 1978) could be considered the outcome of occasional northward extensions of the emergence-zone borders in certain climatic situations.

Transovarial transmissions, recently demonstrated in *A. aegypti*, have apparently been corroborated in the field by the isolation of YF virus from male mosquitoes of the *A. furcifer* group. They also account for the survival of the virus during the dry season in emergence zone, as well as for the occurrence of pluriannual epizootic phases whose intensity and duration seems to be correlated to climatic factors and to the size of the monkey population. Yellow fever virus has also been isolated from the adults and eggs of *Amblyomma variegatum* ticks collected in the field. The notion of transovarial transmission supports the concept of "reservoir vector" formulated in previous studies. Nevertheless, the regular recurrence of the amplification process made possible by the mosquito-veterbrate cycle appears to be essential to survival of the YF virus.

Reported by WHO Weekly Epidemiologic Record 1982;57:197-8.

Epidemiologic Notes and Reports

Measles, United States — Weeks 27-30, 1982

In the 4-week period July 4-July 31, 1982 (reporting weeks 27-30), 155 cases of measles were reported to CDC—an average of 39 cases per week, for a total 11% below the 174 cases reported during the same period of 1981. Only 29 (0.9%) of the nation's 3,144 counties reported measles to CDC during this period.

Of the 155 measles cases, 10 were imported from eight countries—England, Federal Republic of Germany, France, Ireland, Mexico, Phillipines, Republic of Korea, and Trinidad. To date, none of these importations has resulted in secondary spread.

During week 30, ending July 31, the only state reporting measles to the *MMWR* was California (23 cases). This is the first time only one state has reported measles in any given week.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note. Forty-nine states, the District of Columbia, and New York City reported no measles cases during the week ending July 31, 1982. Although limited transmission may persist in a few areas, it appears that most of the country is free of indigenous measles. Despite the usual seasonal decrease, the first week with only one state reporting measles indicates continued progress in the national effort to eliminate indigenous measles.

Bacteriologic Conversion of Sputum among Tuberculosis Patients

By the end of 1981, 83 state and local health departments had submitted to CDC information on bacteriologic conversion for 11,242 patients with sputum-positive pulmonary tuberculosis (by smear or culture or both), who began chemotherapy during 1980. These patients represented about 60% of the sputum-positive pulmonary tuberculosis cases reported in the United States in 1980. Within 3 months of starting treatment, 55.3% had negative sputum. Of the 10,055 patients who had not relocated or died, 77.0% had sputum-negative results within 6 months of starting treatment (Table 1). Eight states (Alabama, Kansas, Kentucky, Nebraska, South Dakota, Utah, Vermont, and Virginia) reported that over 90% of their patients had negative sputum within 6 months; Connecticut and the District of Columbia reported fewer than half became sputum-negative within 6 months (Table 2). Overall, 6 months after starting treatment, 5.4% of the 10,055 patients had positive sputum, 2.6% were lost to supervision, and 14.9% were not known to have had a follow-up sputum examination (Table 2).

Since 1972, a varying number of state and local health departments have submitted similar data to CDC. The number of reporting areas has ranged from a low of 42 in 1972 to a high of 87 in 1979. Over the 9-year period, the percentage of patients known to have converted to negative sputum after 6 months of treatment has fallen from 87.5% to 77.0%. The percentage

(Continued on page 459)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		33rd Week Ending			Cumulative, First 33 Weeks		
		August 21, 1982	August 22, 1981	Median 1977-1981	August 21, 1982	August 22, 1981	Median 1977-1981
Aseptic meningitis		324	427	311	3,895	4,345	3,207
Brucellosis		3	1	6	101	92	114
Encephalitis:	Primary (arthropod-borne & unspec.)	34	65	50	604	679	512
	Post-infectious	4	-	4	47	63	144
Gonorrhea	Civilian	17,192	20,972	21,139	573,990	630,424	616,951
	Military	325	512	491	15,980	18,512	17,135
Hepatitis	Type A	445	450	582	13,750	16,129	18,072
	Type B	426	380	354	13,129	12,920	10,461
	Non A, Non B	45	N	N	1,347	N	N
	Unspecified	214	187	187	5,758	6,904	6,366
Legionellosis		21	N	N	287	N	N
Leprosy		7	5	4	127	165	109
Malaria		21	40	19	617	924	468
Measles (rubeola)		14	27	123	1,171	2,542	12,722
Meningococcal infections:	Total	36	44	32	2,014	2,463	1,869
	Civilian	36	44	31	2,002	2,454	1,852
	Military	-	-	-	12	9	14
Mumps		29	35	84	4,059	3,097	10,914
Pertussis		54	41	44	818	746	874
Rubella (German measles)		69	22	64	1,945	1,695	10,513
Syphilis (Primary & Secondary):	Civilian	654	640	559	20,628	19,051	15,254
	Military	9	6	4	266	238	190
Tuberculosis		486	478	563	16,137	16,834	17,630
Tularemia		8	7	6	142	148	128
Typhoid fever		12	18	14	241	326	297
Typhus fever, tick-borne (RMSF)		39	52	50	739	904	808
Rabies, animal		125	182	124	3,967	4,881	3,174

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism	54	Paralytic	3
Cholera	-	Psittacosis (Calif. 1)	83
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (Fla. 1, Tenn. 1, Ala. 1)	51
Leptospirosis	34	Trichinosis (Md. 1, Oreg. 2, Hawaii 1)	65
Plague	10	Typhus fever, flea-borne (endemic, murine)	24

TABLE III. Cases of specified notifiable diseases, United States, weeks ending August 21 1982 and August 22, 1981 (33rd week)

Reporting Area	Aseptic Menin-gitis	Brucel-losis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	1982	Cum 1982	Cum 1982	Cum 1982	Cum 1982	Cum 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	324	101	604	47	573,990	630,424	445	426	45	214	21	127
NEW ENGLAND	18	3	24	4	14,233	15,481	7	13	1	20	3	1
Maine	-	-	-	-	672	795	1	-	-	-	-	-
N.H.	5	-	1	-	412	565	-	-	-	-	1	-
Vt	-	-	-	-	268	264	-	-	-	-	-	-
Mass.	12	-	9	-	6,585	6,461	3	3	-	19	-	-
R.I.	-	-	-	-	971	848	-	-	-	-	-	-
Conn	1	3	14	4	5,325	6,548	3	10	1	1	2	1
MID. ATLANTIC	51	3	65	12	74,317	75,114	69	80	3	21	3	4
Upstate N.Y.	21	3	23	3	12,081	12,475	13	22	-	4	-	1
N.Y. City	12	-	12	-	31,152	31,010	22	17	-	6	-	1
N.J.	12	-	13	-	13,341	14,340	14	25	3	6	-	1
Pa.	6	-	17	9	17,743	17,289	20	16	-	5	3	1
E.N. CENTRAL	66	1	133	10	80,576	94,983	76	62	4	21	6	3
Ohio	18	1	47	4	23,808	31,492	30	21	1	11	3	-
Ind	12	-	30	3	9,687	8,174	26	9	1	7	-	-
Ill	-	-	9	1	19,063	26,742	4	10	2	1	-	3
Mich	36	-	42	-	20,321	20,089	16	22	-	2	3	-
Wis	-	-	5	2	7,697	8,486	-	-	-	-	-	-
W.N. CENTRAL	7	14	50	3	28,112	29,719	5	8	1	5	1	3
Minn	-	1	20	1	4,161	4,628	-	-	-	-	-	1
Iowa	4	3	18	1	2,968	3,253	1	1	1	1	1	-
Mo	1	4	6	-	13,201	13,729	2	3	-	4	-	1
N. Dak	-	-	-	-	380	402	-	-	-	-	-	-
S. Dak	-	1	-	1	768	817	-	-	-	-	-	1
Nebr	1	2	3	-	1,707	2,322	2	3	-	-	-	-
Kans	1	3	3	-	4,927	4,568	-	1	-	-	-	-
S. ATLANTIC	51	18	101	7	135,615	155,810	42	96	8	26	6	8
Del	-	-	-	-	2,511	2,505	-	-	-	-	-	-
Md	6	-	16	-	19,099	17,921	6	26	2	1	-	3
D.C.	-	-	-	-	8,858	9,225	-	-	-	-	-	-
Va	4	7	20	1	12,713	14,252	1	11	2	1	-	1
W. Va	1	-	6	-	1,753	2,354	1	3	-	1	-	-
N.C.	21	-	11	1	24,737	24,122	7	11	-	2	-	-
S.C.	3	2	-	-	15,189	15,207	5	15	-	3	-	-
Ga	3	1	8	-	9,483	31,980	2	10	-	2	6	-
Fla	13	8	40	5	41,272	38,244	20	20	4	16	-	4
E.S. CENTRAL	13	11	33	2	51,308	52,466	12	19	1	4	-	-
Ky	2	-	-	-	6,937	6,535	2	1	-	1	-	-
Tenn	5	6	16	-	20,180	19,858	3	10	-	2	-	-
Ala	6	4	12	2	15,104	15,886	2	6	1	1	-	-
Miss	-	1	5	-	9,087	10,187	5	2	-	-	-	-
W.S. CENTRAL	35	27	77	1	83,030	83,349	80	29	1	80	1	18
Ark	1	5	4	-	6,760	6,158	2	-	-	14	1	-
La	1	6	13	-	15,652	14,218	9	5	1	10	-	-
Okla	4	4	18	-	9,086	8,950	9	6	-	8	-	-
Tex	29	12	42	1	51,532	54,023	60	18	-	48	-	18
MOUNTAIN	16	-	19	3	20,402	24,504	29	9	2	6	1	2
Mont	-	-	-	-	846	893	-	-	-	2	-	-
Idaho	1	-	-	-	935	1,098	1	-	-	-	-	1
Wyo	2	-	-	-	595	564	-	-	-	-	-	-
Colo	5	-	9	1	5,493	6,671	5	1	-	2	-	-
N. Mex	2	-	-	-	2,650	2,642	13	2	1	-	1	-
Ariz	3	-	6	-	5,450	7,346	1	-	1	-	-	-
Utah	3	-	-	2	975	1,152	5	3	-	1	-	1
Nev	-	-	4	-	3,458	4,138	4	3	-	1	-	-
PACIFIC	67	24	102	5	86,397	98,998	125	110	24	31	-	88
Wash	2	1	9	-	7,143	8,221	3	5	2	3	-	7
Oreg	3	-	3	-	4,957	5,866	10	8	-	1	-	1
Calif	54	22	86	5	70,593	80,463	109	95	22	27	-	58
Alaska	4	1	3	-	2,131	2,476	2	1	-	-	-	1
Hawaii	4	-	1	-	1,573	1,972	1	1	-	-	-	21
Guam	U	-	-	-	72	78	U	U	U	U	U	-
P.R.	-	-	1	-	1,722	2,055	6	16	-	3	-	-
V.I.	U	-	-	-	142	126	U	U	U	U	U	-
Pac. Trust Terr	U	-	-	-	246	284	U	U	U	U	U	12

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 21, 1982 and August 22, 1981 (33rd week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	21	617	14	1,171	2,542	36	2,014	29	4,059	54	69	1,945	1,695
NEW ENGLAND	-	32	-	10	75	2	108	-	164	-	-	18	111
Maine	-	-	-	-	5	1	8	-	36	-	-	-	33
N.H.	-	1	-	2	6	1	15	-	12	-	-	8	43
Vt.	-	-	-	2	2	-	6	-	7	-	-	-	-
Mass.	-	21	-	3	54	-	27	-	79	-	-	6	23
R.I.	-	2	-	-	-	-	11	-	14	-	-	1	-
Conn.	-	8	-	3	8	-	39	-	16	-	-	3	12
MID. ATLANTIC	6	91	1	157	808	8	364	3	255	10	-	91	200
Upstate N.Y.	1	21	-	110	206	3	129	1	56	1	-	44	94
N.Y. City	3	29	1	39	70	4	63	2	44	1	-	31	49
N.J.	1	24	-	4	54	-	74	-	36	3	-	16	46
Pa.	1	17	-	4	478	1	98	-	119	5	-	-	11
E.N. CENTRAL	-	39	-	71	79	2	238	7	2,145	9	2	159	353
Ohio	-	9	-	1	15	-	87	2	1,556	3	-	-	3
Ind.	-	1	-	2	8	-	22	-	37	3	1	27	123
Ill.	-	6	-	23	23	-	63	-	169	2	1	57	85
Mich.	-	21	-	45	30	2	52	-	294	-	-	48	34
Wis.	-	2	-	-	3	-	12	5	89	1	-	27	108
W.N. CENTRAL	-	17	-	49	10	-	87	1	542	1	-	55	76
Minn.	-	2	-	-	3	-	21	-	416	-	-	5	7
Iowa	-	5	-	-	1	-	5	-	30	-	-	-	4
Mo.	-	5	-	2	1	-	26	1	16	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	11	-	-	-	-	-	1
Kans.	-	1	-	44	1	-	14	-	79	1	-	11	62
S. ATLANTIC	5	98	1	37	355	9	406	3	233	13	2	70	129
Del.	-	4	-	-	-	-	-	-	10	1	-	1	1
Md.	1	15	-	2	4	-	25	-	24	6	-	33	1
D.C.	1	4	-	1	1	-	2	-	-	-	-	-	-
Va.	1	28	-	14	6	2	48	-	32	-	-	13	5
W. Va.	-	6	1	3	9	-	8	2	87	1	-	1	22
N.C.	-	3	-	-	3	2	79	-	11	-	-	1	5
S.C.	-	4	-	-	2	-	47	-	13	2	-	1	8
Ga.	1	13	-	-	108	1	83	-	11	1	-	6	35
Fla.	1	21	-	17	222	4	114	1	45	2	2	14	52
E.S. CENTRAL	-	7	1	9	5	5	134	-	39	6	1	44	28
Ky.	-	4	1	2	1	3	24	-	12	1	1	26	19
Tenn.	-	-	-	6	2	1	56	-	15	3	-	2	8
Ala.	-	-	-	-	2	-	45	-	6	2	-	-	1
Miss.	-	3	-	1	-	1	9	-	6	-	-	16	-
W.S. CENTRAL	1	46	4	38	832	8	242	4	165	2	2	102	141
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	3
La.	-	3	-	2	2	7	49	-	5	-	-	1	9
Okla.	-	6	4	20	5	-	25	-	-	-	-	3	-
Tex.	1	34	-	16	824	1	156	4	154	2	2	97	129
MOUNTAIN	-	17	-	8	33	-	96	3	77	1	-	74	82
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	-	-	6	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	7
Colo.	-	8	-	6	9	-	41	1	15	-	-	6	30
N. Mex.	-	2	-	-	8	-	14	-	-	1	-	5	5
Ariz.	-	3	-	2	5	-	16	-	33	-	-	14	19
Utah	-	2	-	-	-	-	8	1	15	-	-	20	5
Nev.	-	-	-	-	10	-	2	1	6	-	-	11	10
PACIFIC	9	270	7	792	345	2	343	8	439	12	62	1,332	575
Wash.	-	14	2	34	3	1	37	-	61	1	-	37	88
Oreg.	-	9	-	15	4	-	67	-	-	-	-	6	50
Calif.	9	245	5	738	336	1	226	8	364	11	62	1,276	422
Alaska	-	-	-	1	-	-	10	-	6	-	-	5	1
Hawaii	-	2	-	4	2	-	3	-	8	-	-	8	14
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	5	89	262	-	7	-	47	1	-	7	3
V.I.	U	-	U	-	24	U	-	U	1	U	U	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	4	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 21, 1982 and August 22, 1981 (33rd week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	20,628	19,051	486	16,137	142	12	241	39	739	3,967
NEW ENGLAND	349	382	14	428	4	2	16	1	8	30
Maine	1	2	2	38	-	-	-	-	-	21
N.H.	1	12	-	12	-	-	-	-	1	-
Vt.	1	13	-	9	-	-	2	-	-	-
Mass.	240	256	9	283	4	2	12	1	4	5
R.I.	18	21	-	17	-	-	-	-	2	-
Conn.	88	78	3	69	-	-	2	-	1	4
MID. ATLANTIC	2,867	2,843	57	2,685	7	2	37	1	28	113
Upstate N.Y.	282	248	20	478	7	-	6	-	9	57
N.Y. City	1,734	1,712	18	976	-	1	21	-	1	-
N.J.	394	391	7	536	-	1	6	1	12	8
Pa.	457	492	12	695	-	-	4	-	6	48
E.N. CENTRAL	1,081	1,328	80	2,480	1	1	20	8	73	433
Ohio	197	192	14	428	-	1	9	8	68	63
Ind.	125	131	7	317	-	-	-	-	-	65
Ill.	514	713	32	1,020	-	-	3	-	5	220
Mich.	182	229	23	580	-	-	7	-	-	4
Wis.	63	63	4	135	1	-	1	-	-	81
W.N. CENTRAL	357	397	12	467	20	1	9	3	23	881
Minn.	67	134	5	82	-	-	5	-	-	156
Iowa	18	16	2	52	1	-	1	-	4	280
Mo.	216	215	3	220	14	-	1	1	8	79
N. Dak.	7	7	-	9	-	-	-	-	-	77
S. Dak.	1	2	-	19	-	-	-	1	4	71
Nebr.	11	5	-	20	2	1	1	-	1	101
Kans.	37	18	2	65	3	-	1	1	6	117
S. ATLANTIC	5,609	5,035	96	3,321	10	-	33	19	414	699
Del.	9	8	7	33	-	-	-	-	-	2
Md.	302	377	13	391	1	-	9	1	41	33
D.C.	315	408	3	133	-	-	-	-	-	-
Va.	390	446	10	371	2	-	2	6	65	356
W. Va.	20	16	1	101	-	-	3	-	7	34
N.C.	418	385	17	530	-	-	-	4	176	49
S.C.	331	330	5	299	6	-	3	3	90	39
Ga.	1,151	1,295	15	498	-	-	-	5	33	139
Fla.	2,673	1,770	25	965	1	-	16	-	2	47
E.S. CENTRAL	1,439	1,273	37	1,500	6	-	14	5	59	472
Ky.	76	69	9	384	-	-	-	1	1	97
Tenn.	392	477	7	492	4	-	2	3	38	277
Ala.	528	356	4	420	-	-	9	1	8	96
Miss.	443	371	17	204	2	-	3	-	12	2
W.S. CENTRAL	5,380	4,575	74	1,956	70	1	25	2	121	763
Ark.	134	89	10	213	44	1	3	-	20	104
La.	1,226	1,062	9	305	3	-	3	-	-	26
Okla.	115	106	4	251	21	-	2	1	64	142
Tex.	3,905	3,318	51	1,187	2	-	17	1	37	491
MOUNTAIN	518	478	10	449	18	1	11	-	9	161
Mont.	3	11	-	27	2	-	-	-	2	58
Idaho	23	17	-	23	1	-	-	-	2	7
Wyo.	14	7	-	2	2	-	-	-	1	13
Colo.	144	149	3	49	3	-	3	-	1	29
N. Mex.	120	92	2	86	1	-	-	-	1	12
Ariz.	115	105	4	194	-	-	5	-	-	32
Utah	15	17	-	25	9	1	2	-	-	7
Nev.	84	80	1	43	-	-	1	-	2	3
PACIFIC	3,028	2,740	106	2,853	6	4	76	-	4	415
Wash.	100	103	6	180	1	-	3	-	-	3
Oreg.	71	61	2	118	-	1	3	-	1	1
Calif.	2,772	2,520	88	2,301	4	3	67	-	3	334
Alaska	8	10	-	57	1	-	1	-	-	77
Hawaii	77	46	10	197	-	-	2	-	-	-
Guam	1	-	U	6	-	U	-	U	-	-
P.R.	369	430	-	243	-	-	2	-	-	33
V.I.	17	13	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	85	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending August 21, 1982 (33rd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	< 1	
NEW ENGLAND	625	430	130	33	19	13	39
Boston, Mass	176	119	35	7	7	8	17
Bridgeport, Conn	37	26	8	1	-	2	5
Cambridge, Mass	23	18	3	2	-	-	5
Fall River, Mass	20	15	5	-	-	-	1
Hartford, Conn	54	28	11	8	7	-	-
Lowell, Mass	24	19	4	-	1	-	-
Lynn, Mass	17	10	6	1	-	-	-
New Bedford, Mass	19	14	4	1	-	-	1
New Haven, Conn	48	31	12	3	2	-	-
Providence, R.I.	68	49	15	3	-	1	5
Somerville, Mass	13	10	3	-	-	-	1
Springfield, Mass	37	30	6	1	-	-	2
Waterbury, Conn	29	17	7	5	-	-	2
Worcester, Mass	60	44	11	1	2	2	-
MID ATLANTIC	2,309	1,476	559	163	52	59	75
Albany, N.Y.	42	26	10	1	3	2	1
Allentown, Pa	17	14	3	-	-	-	1
Buffalo, N.Y.	110	76	21	7	4	2	-
Camden, N.J.	34	19	7	3	2	3	2
Elizabeth, N.J.	24	19	4	1	-	-	2
Erie, Pa †	36	25	7	2	-	2	1
Jersey City, N.J.	44	28	15	1	-	-	1
N.Y. City, N.Y.	1,234	770	290	111	27	36	36
Newark, N.J.	50	28	13	5	1	3	3
Paterson, N.J.	25	15	8	-	1	1	1
Philadelphia, Pa †	288	181	82	15	6	4	12
Pittsburgh, Pa †	60	35	20	3	-	2	-
Reading, Pa	27	22	4	1	-	-	3
Rochester, N.Y.	110	65	35	3	5	2	6
Schenectady, N.Y.	30	21	6	2	1	-	-
Scranton, Pa †	27	20	7	-	-	-	2
Syracuse, N.Y.	68	48	15	3	1	1	1
Trenton, N.J.	35	29	3	2	1	-	-
Utica, N.Y.	15	13	2	-	-	-	-
Yonkers, N.Y.	33	22	7	3	-	1	3
E.N. CENTRAL	2,170	1,311	544	151	82	81	58
Akron, Ohio	55	37	14	2	-	2	-
Canton, Ohio	39	28	10	1	-	-	3
Chicago, Ill	548	294	140	53	30	31	15
Cincinnati, Ohio	154	111	27	3	5	8	8
Cleveland, Ohio	151	85	49	7	5	5	3
Columbus, Ohio	91	48	27	9	3	4	-
Dayton, Ohio	110	62	35	8	3	2	5
Detroit, Mich	245	145	57	24	11	8	4
Evansville, Ind	50	33	14	2	1	-	3
Fort Wayne, Ind	54	36	11	5	1	1	1
Gary, Ind	9	3	3	1	2	-	-
Grand Rapids, Mich	58	38	13	2	2	2	2
Indianapolis, Ind	169	95	45	14	8	7	1
Madison, Wis	26	15	8	-	2	1	4
Milwaukee, Wis	130	92	29	7	-	2	-
Peoria, Ill	43	30	8	-	2	3	3
Rockford, Ill	41	29	9	2	1	-	-
South Bend, Ind	52	34	11	1	3	3	5
Toledo, Ohio	88	57	21	6	2	2	1
Youngstown, Ohio	57	39	13	4	1	-	-
W.N. CENTRAL	660	452	131	34	24	18	19
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn	24	17	5	1	-	1	1
Kansas City, Kans	30	18	8	3	1	-	-
Kansas City, Mo	117	68	33	6	5	5	3
Lincoln, Nebr	24	21	3	-	-	-	3
Minneapolis, Minn	79	51	11	7	4	6	1
Omaha, Nebr	68	50	12	5	-	1	4
St. Louis, Mo	142	94	31	10	6	1	3
St. Paul, Minn	66	44	15	2	3	2	1
Wichita, Kans	57	38	13	-	4	2	3
S. ATLANTIC	1,017	659	204	59	38	52	39
Atlanta, Ga	123	72	33	14	3	1	6
Baltimore, Md	104	70	24	3	5	2	4
Charlotte, N.C.	62	31	15	4	4	7	2
Jacksonville, Fla	103	63	24	8	4	4	2
Miami, Fla	101	57	21	11	5	7	-
Norfolk, Va	52	23	21	2	1	5	6
Richmond, Va	49	28	14	2	3	2	6
Savannah, Ga	44	30	11	1	2	-	5
St. Petersburg, Fla	67	49	8	3	3	4	1
Tampa, Fla	91	61	20	2	2	6	4
Washington, D.C. §	182	154	3	6	6	9	3
Wilmington, Del	39	21	10	3	-	5	-
E.S. CENTRAL	721	429	183	52	37	20	29
Birmingham, Ala	124	65	33	10	12	4	2
Chattanooga, Tenn	50	36	11	3	-	-	7
Knoxville, Tenn	38	22	8	6	1	1	-
Louisville, Ky	92	51	29	5	5	2	-
Memphis, Tenn	176	120	35	13	6	2	6
Mobile, Ala	69	38	18	2	7	4	3
Montgomery, Ala	63	35	15	7	2	4	5
Nashville, Tenn	109	62	34	6	4	3	4
W.S. CENTRAL	1,456	789	367	160	89	49	34
Austin, Tex	55	35	12	6	2	-	5
Baton Rouge, La	42	22	14	4	2	-	3
Corpus Christi, Tex	42	24	7	5	4	2	-
Dallas, Tex	220	124	56	21	12	7	2
El Paso, Tex	57	37	11	6	-	1	2
Fort Worth, Tex	91	53	25	6	7	-	6
Houston, Tex	465	211	128	71	41	14	3
Little Rock, Ark	69	43	14	7	2	3	2
New Orleans, La	97	50	24	11	8	4	1
San Antonio, Tex	156	91	40	13	6	6	5
Shreveport, La	86	53	21	3	-	9	2
Tulsa, Okla	76	46	15	7	5	3	3
MOUNTAIN	592	333	158	43	26	32	14
Albuquerque, N.Mex	87	54	20	7	4	2	2
Colo. Springs, Colo	31	15	7	3	3	3	1
Denver, Colo	124	60	45	7	2	9	3
Las Vegas, Nev	65	37	13	11	-	4	-
Ogden, Utah	13	8	1	2	-	2	1
Phoenix, Ariz	112	70	26	6	8	2	-
Pueblo, Colo	19	8	8	1	1	1	1
Salt Lake City, Utah	64	33	16	2	6	7	1
Tucson, Ariz	77	48	21	4	2	2	5
PACIFIC	1,665	1,046	386	113	45	75	81
Berkeley, Calif	17	11	4	1	1	-	1
Fresno, Calif	65	37	15	3	2	8	3
Glendale, Calif	38	29	8	1	-	-	2
Honolulu, Hawaii	49	26	16	2	3	2	4
Long Beach, Calif	67	40	16	7	1	3	3
Los Angeles, Calif	493	315	103	44	14	17	17
Oakland, Calif	71	47	14	3	3	4	3
Pasadena, Calif	31	23	6	-	1	1	-
Portland, Oreg	107	65	27	6	3	6	5
Sacramento, Calif	66	37	16	4	1	8	5
San Diego, Calif	154	96	35	9	5	9	15
San Francisco, Calif	121	75	27	14	3	2	4
San Jose, Calif	144	90	42	6	1	5	12
Seattle, Wash	142	91	34	8	4	5	1
Spokane, Wash	60	40	13	3	1	3	5
Tacoma, Wash	40	24	10	2	2	2	1
TOTAL	11,215††	6,925	2,662	808	412	399	388

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Bacteriologic Conversion – Continued

from whom no sputum result was available has risen from 6.1% to 14.9%. The percentage known to have positive sputum has remained about 5%; and the percentage lost to supervision has risen from 1.7% to 2.6% (Figure 1). The secular trends for 15 individual areas reporting data for each of the 9 years are similar to the trend for all the areas (Figure 2), suggesting that the observed changes are real and do not result from adding areas with different program characteristics to the data base.

Reported by Tuberculosis Control Div, Center for Prevention Svcs, CDC.

Editorial Note: Since 1972, the number of health departments using the bacteriologic conversion of sputum as an indicator of program effectiveness has doubled, suggesting many areas consider it a useful program-evaluation tool. Periodic bacteriologic examination of the sputum of patients with pulmonary tuberculosis is important for several reasons: 1) It provides objective evidence of the patient's response to therapy. Delayed or absent response may be due to patient noncompliance, drug-resistant organisms, prescription error, immunosuppression, or malabsorption of drugs. Failure to detect these problems early and to adjust the chemotherapy regimen accordingly will lead to treatment failure and potential transmission of tubercle bacilli. 2) Periodic bacteriologic examination of sputum also estimates the level of patient infectivity, which permits informed decisions to be made about hospital isolation procedures and the investigation and management of patient contacts (*1,2*). 3) Periodic bacteriologic examination aids in establishing an appropriate length of therapy. For patients on short-course chemotherapy, it is currently recommended that the patient receive isoniazid (INH) and rifampin (RIF) for at least 6 months after sputum conversion (the time of the first negative sputum test, after which there are no subsequent positive sputa), or a minimum of 9 months total therapy, whichever is *longer* (*3*). Therefore, the appropriate length of treatment can be calculated for those patients for whom the date of sputum conversion is known.

Among patients with uncomplicated pulmonary tuberculosis treated with INH and RIF, about 95% should become sputum-negative within 3 months if they comply with their treatment regimens (*4*). Because the data reported above include patients treated with regimens other than INH and RIF, noncompliant patients, and patients with drug-resistant organisms or immune-compromising conditions, a conversion rate of 95% within 3 months cannot realistically be expected. Nevertheless, the reported data indicate a need for improvement. The downward trend since 1972 in the percentage of patients known to have become sputum-negative is compensated for by the rise in the percentage of patients not known to have had a follow-up sputum examination (Figure 1). The number from whom no sputum result was available may include patients whom the attending physician presumed had converted but from whom no specimen was obtained to document sputum negativity. Some areas have indicated that the trend reflects the shift in patient care from health departments to private practitioners, who either do not examine sputum or do not report results to health departments.

TABLE 1. Bacteriologic conversion of sputum-positive tuberculosis patients, 1980

83 Health Areas	Patients with Positive Sputum	Sputum Converted in 3months	Observation Discontinued (A)	Patients Observed for 6months	Sputum Converted in 6months (B)
Number	11,242	6,221	1,187	10,055	7,747
Percent		53.3	10.6	89.4	77.0

(A) Consists of 712 patients who died and 475 patients who moved.
(B) Percent of patients observed for 6 months.

Bacteriologic Conversion – Continued

TABLE 2. Bacteriologic conversion of sputum from tuberculosis patients by state, 1980

State	Patients With Positive Sputum*	Converted in 6 Months		Did Not Convert in 6 Months					
				Still Positive		No Sputum		Lost	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)
Alabama†	521	498	(95.6)	11	(2.1)	12	(2.3)	0	(0.0)
Alaska	35	26	(74.3)	1	(2.9)	8	(22.9)	0	(0.0)
Arizona†	184	163	(88.6)	1	(0.5)	14	(7.6)	6	(3.3)
Arkansas††									
California§	127	65	(51.2)	19	(15.0)	38	(29.9)	5	(3.9)
Colorado††									
Connecticut	119	52	(43.7)	9	(7.6)	56	(47.1)	2	(1.7)
Delaware††									
District of Columbia	189	94	(49.7)	2	(1.1)	87	(46.0)	6	(3.2)
Florida†	1,089	929	(85.3)	49	(4.5)	73	(6.7)	38	(3.5)
Georgia†	496	435	(87.7)	26	(5.2)	33	(6.7)	2	(0.4)
Hawaii††									
Idaho††									
Illinois§	180	143	(79.4)	9	(5.0)	26	(14.4)	2	(1.1)
Indiana††									
Iowa	53	33	(62.3)	5	(9.4)	12	(22.6)	3	(5.7)
Kansas†	81	79	(97.5)	1	(1.2)	1	(1.2)	0	(0.0)
Kentucky†	367	344	(93.7)	6	(1.6)	16	(4.4)	1	(0.3)
Louisiana††									
Maine	27	20	(74.1)	2	(7.4)	5	(18.5)	0	(0.0)
Maryland†	280	228	(81.4)	9	(3.2)	39	(13.9)	4	(1.4)
Massachusetts§	123	77	(62.6)	6	(4.9)	36	(29.3)	4	(3.3)
Michigan††									
Minnesota†	90	73	(81.1)	4	(4.4)	11	(12.2)	2	(2.2)
Mississippi††									
Missouri†§	216	162	(75.0)	3	(1.4)	43	(19.9)	8	(3.7)
Montana§	11	6	(54.5)	2	(18.2)	3	(27.3)	0	(0.0)
Nebraska†	31	30	(96.8)	0	(0.0)	0	(0.0)	1	(3.2)
Nevada††									
New Hampshire††									
New Jersey†§	269	204	(75.8)	16	(5.9)	48	(17.8)	1	(0.4)
New Mexico†	76	62	(81.6)	5	(6.6)	8	(10.5)	1	(1.3)
New York†	1,165	568	(48.8)	122	(10.5)	330	(28.3)	145	(12.4)
North Carolina††									
North Dakota	26	22	(84.6)	0	(0.0)	4	(15.4)	0	(0.0)
Ohio†	514	308	(59.9)	21	(4.1)	184	(35.8)	1	(0.2)
Oklahoma††									
Oregon††									
Pennsylvania†	567	424	(74.8)	23	(4.1)	112	(19.8)	8	(1.4)
Rhode Island	34	27	(79.4)	0	(0.0)	4	(11.8)	3	(8.8)
South Carolina	330	271	(82.1)	8	(2.4)	51	(15.5)	0	(0.0)
South Dakota	31	28	(90.3)	0	(0.0)	2	(6.5)	1	(3.2)
Tennessee†	521	442	(84.8)	35	(6.7)	42	(8.1)	2	(0.4)
Texas†	1,308	1,060	(81.0)	99	(7.6)	136	(10.4)	13	(1.0)
Utah	32	29	(90.6)	1	(3.1)	0	(0.0)	2	(6.3)
Vermont	13	12	(92.3)	0	(0.0)	1	(7.7)	0	(0.0)
Virginia†	668	634	(94.9)	34	(5.1)	0	(0.0)	0	(0.0)
Washington†	163	129	(79.1)	2	(1.2)	28	(17.2)	4	(2.5)
West Virginia	112	65	(58.0)	12	(10.7)	35	(31.3)	0	(0.0)
Wisconsin††									
Wyoming††									
Guam††									
Puerto Rico††									
Virgin Islands	7	5	(71.4)	0	(0.0)	2	(28.6)	0	(0.0)
TOTAL ALL AREAS	10,055	7,747	(77.0)	543	(5.4)	1,500	(14.9)	265	(2.6)

*Observed for 6 months

†Represents data from more than 1 reporting area

§Data for less than entire state or for less than entire year

††No data available

Bacteriologic Conversion – Continued

The repeated induction of sputa from asymptomatic patients is not recommended merely to supply data for a progress report. After sputum negativity has been established and symptoms have disappeared, no more specimens need be routinely collected unless signs or symptoms or both suggest relapse. Early in the course of treatment, however, sputum examination should be performed frequently, until sputum-negativity is documented. Without negative sputum results, neither the clinician nor the health department can know that a patient has become noninfectious.

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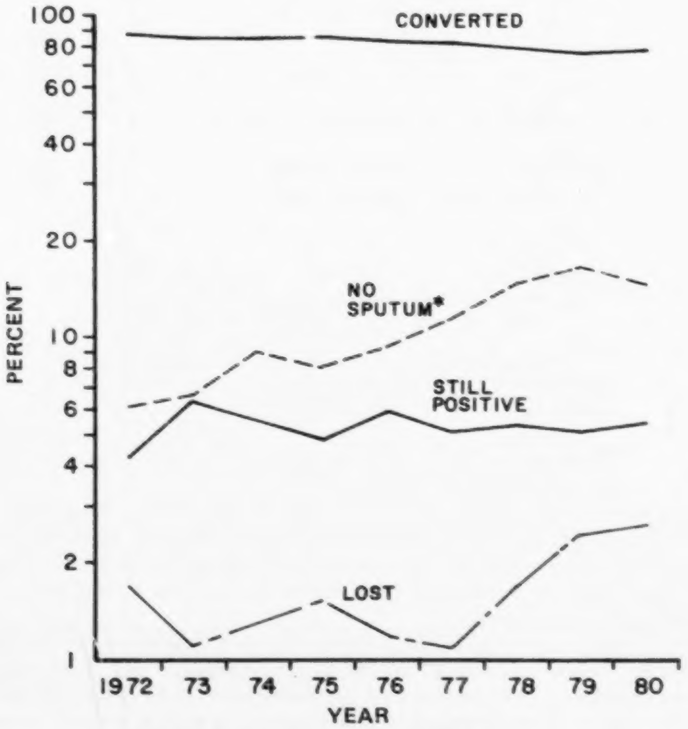
1. CDC. Guidelines for prevention of TB transmission in hospitals. Atlanta: U.S. Department of Health, Education, and Welfare Public Health Service, CDC, 1979; HEW Pub. No. CDC 79-8371.
2. American Thoracic Society. Guidelines for the investigation and management of tuberculosis contacts. Am Rev Respir Dis 1976;114:459-63.
3. CDC. Guidelines for short-course tuberculosis chemotherapy. MMWR 1980;29:97-100, 105.
4. Long MW, Snider DE Jr, Farer LS. U.S. Public Health Service Cooperative trial of three rifampin-isoniazid regimens in treatment of pulmonary tuberculosis. Am Rev Respir Dis 1979;119:879-94.

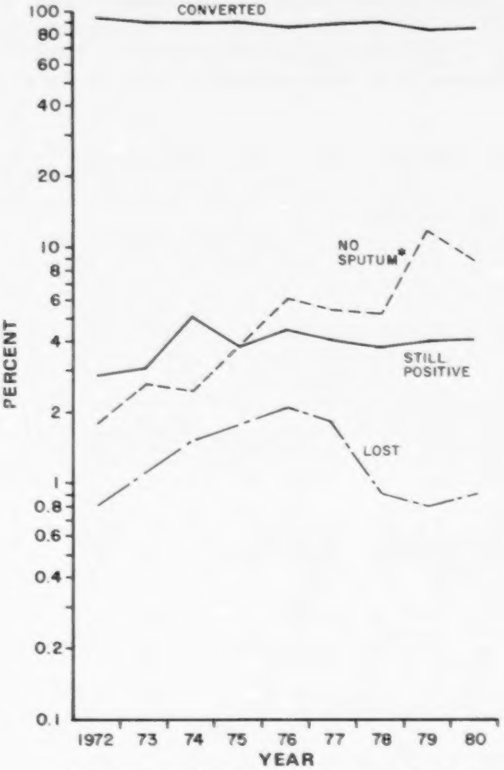
FIGURE 1. Status of tuberculosis patients with initially positive sputum 6 months after starting treatment, varying programs reporting, 1972-1980



*Sputum examination not done or not reported.

Bacteriologic Conversion – Continued

FIGURE 2. Status of tuberculosis patients with initially positive sputum 6 months after starting treatment, 15 programs reporting, 1972-1980



*Sputum examination not done or not reported.

Errata, Vol. 31, No. 32

p.433. In the article "Arboviral Encephalitis — United States, 1982," the sentence naming the Georgia counties with California encephalitis should have read: "In May and June, five serologically confirmed cases occurred in children 3 months to 10 years of age residing in Bacon County (one case), Coffee County (one), Crisp County (one), and Jeff Davis County (two)."

p.437. In the article, "Cercarial Dermatitis among Bathers in California; Katayama Syndrome among Travelers to Ethiopia," the fifth paragraph should begin: "In the cercarial dermatitis outbreak, the demonstration of infected snails at the suspected site of exposure was convincing evidence for that diagnosis, as well as for incrimination of the river as the first source of that type documented in California."

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MMWR

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Current Trends

Hepatitis B Virus Vaccine Safety: Report of an Inter-Agency Group

On June 25, 1982, the Immunization Practices Advisory Committee (ACIP) recommended using inactivated hepatitis B virus (HBV) vaccine for individuals who are at high risk for HBV infection because of their geographic origins, life styles, or exposures to HBV at home or work (*1*). The recommendations included statements on vaccine efficacy and safety. However, requests for additional information on safety continue to be received, primarily because of the plasma origins of the antigen used to prepare the vaccine. In response to these requests, the Inter-Agency Group to Monitor Vaccine Development, Production, and Usage, with representatives from the Centers for Disease Control (CDC), Food and Drug Administration (FDA), and National Institutes of Health (NIH), has further reviewed the available data. Its conclusions on vaccine production and safety evaluation follow.

HBV vaccine licensed in the United States is prepared from human plasma containing hepatitis surface antigen (HBsAg) (*2*). Hypothetical side effects from the vaccine include reactions to blood substances or to infectious agents present in donor plasma. In trials involving approximately 1900 persons, reactions among vaccine recipients were compared with reactions among placebo recipients, and only minor immediate complaints, primarily of soreness at the injection site, were observed (*3,4*). Infectious agents that might be present in donor plasma are most likely to be viruses. Virus transmission by blood or blood products requires the virus to circulate in plasma or in cellular elements such as leukocytes. The chance of virus transmission increases with the duration of the viremic state. HBV is the only well-characterized extra-cellular human virus with a prolonged carrier state. Other agents, presumably viruses, which remain unidentified despite their common association with post-transfusion hepatitis, are responsible for non-A/non-B hepatitis.

Beginning in 1978, a disease or group of diseases was recognized, manifested by Kaposi's sarcoma and opportunistic infections, associated with a specific defect in cell-mediated immunity. This group of clinical entities, along with its specific immune deficiency, is now called acquired immune deficiency syndrome (AIDS). The epidemiology of AIDS suggests an unidentified and uncharacterized blood-borne agent as a possible cause of the underlying immunologic defect (*5-7*). Because AIDS occurs

HE 20.7009:

Hepatitis B — Continued

among populations that are sources of HBV-positive plasma, this syndrome should be considered in regard to the inherent safety of HBV vaccine.

Vaccine plasma donors are screened, and only healthy individuals (HBsAg positive) are selected. The plasmapheresis centers are licensed and inspected by the FDA. A physician gives each donor a complete physical examination, which includes a history and suitable laboratory tests. At the time of each donation, the donor's hemoglobin, hematocrit, and serum protein levels must be within normal limits. HBsAg-positive donors' levels of serum aminotransferase activity are permitted to exceed those limits set for otherwise healthy donors, but they must be stable.

The process for producing each lot of licensed HBV vaccine is designed to remove or inactivate infectious HBV and other viruses from the desired immunogen, the 22 nm HBsAg particle. The process relies on both biophysical elimination of infectious particles and treatments which inactivate viruses (pepsin at pH 2, 8M urea, and formalin). The elimination of infectious virus by biophysical purification depends on the density and flotational property of HBsAg in contrast with those of infectious virus particles. The double ultracentrifugation process (isopyknic and rate zonal) has been proven effective in removing 10^4 infectious doses of HBV/ml, as measured by chimpanzee inoculation (*8*). Pepsin treatment alone (1 μg/ml, pH 2.0, 37 C for 18 hours) inactivates 10^5 or more infectious doses of HBV/ml, as measured by chimpanzee inoculation, and has been shown to inactivate viruses in the rhabdovirus, poxvirus, togavirus, reovirus, herpesvirus and coronavirus groups (*9,10*). Urea treatment alone (8M, 37 C for four hours) inactivates 10^5 or more infectious doses of HBV/ml and has been shown to inactivate viruses in the rhabdovirus, myxovirus, poxvirus, togavirus, reovirus, picornavirus, herpesvirus, and coronavirus groups (*9*). Slow viruses, characterized by the viruses of kuru and Creutzfeld-Jakob disease, are inactivated by 6M urea, a lesser concentration than that routinely applied to the HBV vaccine (*11*). Formalin alone inactivates HBV (*9*), as well as many other virus groups, including parvoviruses (*12*), retroviruses (*13,14*) and the delta agent (*15*).

Each lot of HBV vaccine is tested for sterility, innocuousness in animals, and pyrogenicity and is free of detectable viruses, as shown by inoculation into both human and monkey cell-culture systems. Additionally, 22 doses of each vaccine lot are inoculated intravenously into four chimpanzees.

United States licensed vaccine (produced by Merck, Sharp, and Dohme) has been given to over 19,000 persons, 6,000 of whom received vaccine between October 1975 and December 1981 and 13,000 of whom received it in 1982. The vaccine has been demonstrated to protect recipients from HBV infection (*3,4*), and no evidence of hepatitis has been observed as a result of HBV vaccination. Also, studies by CDC, FDA, and others of aminotransferase levels in chimpanzees and humans confirm that HBV vaccine does not transmit the non-A/non-B agent(s).

In three vaccine-placebo trials (two among homosexual men between 1978 and 1980 [*3,4*] and one among hospital employees in 1981), 549, 714, and 664 persons, respectively, received vaccine, and equal numbers received placebo. Follow-up surveillance of participants in these studies was 24, 15, and 18 months, respectively, after the first dose of vaccine with no cases of AIDS being reported. In

Hepatitis B – Continued

addition to the vaccine/placebo trials, 17,602 persons (including 8,941 health-care workers and 5,985 healthy adults, children, and infants from non-high-risk group settings) have received Merck HBV vaccine in various study settings. Periods of follow-up of these vaccine recipients have ranged from a few months to over 7 years. However, lots used in early studies may have been produced before the occurrence of AIDS. Some of the groups from which HBV vaccine is prepared or for which it is recommended are also at high risk for AIDS; therefore reports of AIDS among donors and vaccinees at some future time may be expected on the basis of chance alone.

To summarize, these findings support the ACIP statement on hepatitis vaccine: 1) immediate side effects are minimal after receipt of HBV vaccine; 2) no long-term reactions have been reported; 3) the purification and inactivation process is known to inactivate representatives of all known groups of animal viruses; 4) each lot is safety tested in primates; 5) no known cases of hepatitis B or non-A/non-B hepatitis have been transmitted by the vaccine and no known occurrence of AIDS has been associated with the vaccine.

Reported by the Inter-Agency Group to Monitor Vaccine Development, Production, and Usage, represented by the Centers for Disease Control, Food and Drug Administration, and National Institutes of Health.

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International Notes

Dengue Type 1 in Mexico

During the past 3 months, health authorities in Mexico have reported cases of dengue-like illness from scattered locations. Serologic evidence from the Instituto de Salubridad y Enfermedades Tropicales in Mexico City suggested the virus was dengue type 1. More recently, transmission has increased with outbreaks reported from Apatzingan and Huetamo in Michoacan State and Culiacan in Sinaloa State on the west coast of Mexico, and from Veracruz, Cordoba, and Tierra Blanca in Veracruz State on the east coast (Figure 1). In the latter state, dengue has moved north and scattered cases have been reported recently from cities in the Tampico area.

An investigation of the outbreak in Cordoba, Veracruz, began in July 1982. Acute-phase serum specimens were taken from 18 patients with a dengue-like illness and sent to the San Juan Laboratories, CDC, for virus isolation. In subsequent visits, paired specimens were obtained from 16 additional patients and were also sent to the same laboratory for virologic and serologic testing.

(Continued on page 473)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		34th Week Ending August 28, 1982	34th Week Ending August 29, 1981	34th Week Ending Median 1977-1981	Cumulative, First 34 Weeks August 28, 1982	Cumulative, First 34 Weeks August 29, 1981	Cumulative, First 34 Weeks Median 1977-1981
Aseptic meningitis		310	432	407	4,210	4,777	3,530
Brucellosis		1	3	3	102	95	117
Encephalitis	Primary (arthropod-borne & unspec.)	43	36	45	646	715	554
	Post-infectious	1	3	3	49	66	148
Gonorrhea	Civilian	17,547	19,263	21,472	591,696	649,687	638,780
	Military	253	372	487	16,289	18,884	17,723
Hepatitis	Type A	412	401	561	14,165	16,530	18,652
	Type B	414	375	311	13,580	13,295	10,765
	Non A, Non B	49	N	N	1,403	N	N
	Unspecified	148	209	188	5,900	7,113	6,525
Legionellosis		15	N	N	302	N	N
Leprosy		1	10	5	128	175	112
Malaria		33	15	15	650	939	477
Measles (rubeola)		14	13	82	1,184	2,555	12,747
Meningococcal infections	Total	35	33	30	2,061	2,496	1,899
	Civilian	35	33	30	2,039	2,487	1,882
	Military	-	-	-	12	9	14
Mumps		20	35	70	4,080	3,132	10,984
Pertussis		58	26	60	878	772	903
Rubella (German measles)		12	11	49	1,958	1,706	10,562
Syphilis (Primary & Secondary)	Civilian	713	603	480	21,348	19,654	15,697
	Military	5	2	5	272	240	193
Tuberculosis		539	568	568	16,653	17,402	18,151
Tularemia		8	8	4	149	156	133
Typhoid fever		14	13	8	255	339	306
Typhus fever, tick-borne (RMSF)		21	39	45	757	943	846
Rabies, animal		144	175	117	4,114	5,056	3,291

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism	54	Paralytic	3
Cholera	-	Psittacosis (Calif 1)	84
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (NYC 1, Pa. 1)	53
Leptospirosis	35	Trichinosis (NYC 1)	66
Plague	10	Typhus fever, flea-borne (endemic, murine)	24

TABLE III. Cases of specified notifiable diseases, United States, weeks ending August 28, 1982 and August 29, 1981 (34th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	310	102	646	49	591,696	649,687	412	414	49	148	15	123
NEW ENGLAND	20	3	28	5	14,772	16,080	6	19	1	8	1	1
Maine	1	-	-	-	752	817	1	1	-	-	-	-
N.H.	1	-	5	-	429	581	2	3	-	-	-	-
Vt.	-	-	-	-	276	266	-	-	1	-	-	-
Mass.	9	-	9	-	6,731	6,740	2	5	-	8	-	-
R.I.	5	-	-	1	995	903	1	2	-	-	-	-
Conn.	4	3	14	4	5,589	6,773	-	8	-	-	1	1
MID. ATLANTIC	39	3	74	13	76,482	77,340	82	93	-	28	5	4
Upstate N.Y.	15	3	24	3	12,406	12,917	13	12	-	3	-	1
N.Y. City	6	-	14	-	31,973	32,105	9	30	-	8	-	1
N.J.	10	-	13	-	13,757	14,539	9	18	-	7	5	1
Pa.	8	-	23	10	18,346	17,779	51	33	-	10	-	1
E.N. CENTRAL	53	1	144	10	83,110	97,902	41	40	4	8	7	3
Ohio	28	1	53	4	24,244	32,047	17	22	2	4	7	-
Ind.	9	-	32	3	10,562	8,412	6	3	-	3	-	-
Ill.	-	-	9	1	19,358	27,357	1	2	2	-	-	3
Mich.	16	-	45	-	20,984	21,249	17	13	-	1	-	-
Wis.	-	-	5	2	7,962	8,837	-	-	-	-	-	-
W.N. CENTRAL	20	14	53	3	28,979	31,016	19	18	-	2	1	3
Minn.	2	1	20	1	4,236	4,846	2	1	-	2	-	1
Iowa	2	3	20	1	3,071	3,383	-	2	-	-	-	-
Mo.	-	4	6	-	13,757	14,317	2	3	-	-	-	1
N. Dak.	2	-	-	-	390	407	-	-	-	-	-	-
S. Dak.	-	1	-	1	802	857	-	-	-	-	-	1
Nebr.	5	2	4	-	1,707	2,359	-	-	-	-	1	-
Kans.	9	3	3	-	5,016	4,847	15	12	-	-	-	-
S. ATLANTIC	48	19	105	7	140,413	160,425	31	88	7	19	-	9
Del.	-	-	-	-	2,606	2,573	-	16	-	1	-	-
Md.	4	-	17	-	20,616	18,344	3	6	4	1	-	3
D.C.	1	-	-	-	9,067	9,436	-	1	-	-	-	-
Va.	10	7	22	1	12,802	14,767	2	16	1	1	-	1
W. Va.	-	-	6	-	1,790	2,419	1	-	-	-	-	-
N.C.	8	-	12	1	25,781	24,942	5	5	-	1	-	-
S.C.	1	2	-	-	15,627	15,664	10	13	-	12	-	-
Ga.	5	1	8	-	9,483	33,103	2	19	1	-	-	1
Fla.	19	9	40	5	42,641	39,177	8	12	1	3	-	4
E.S. CENTRAL	32	11	36	2	53,213	54,047	25	28	6	2	-	-
Ky.	3	-	-	-	7,255	6,709	18	1	-	-	-	-
Tenn.	5	6	16	-	20,972	20,485	4	16	4	2	-	-
Ala.	24	4	15	2	15,542	16,363	3	10	2	-	-	-
Miss.	-	1	5	-	9,444	10,490	-	1	-	-	-	-
W.S. CENTRAL	43	27	82	1	85,183	85,709	95	45	1	41	1	18
Ark.	3	5	6	-	6,952	6,354	-	1	-	9	-	-
La.	6	6	13	-	15,951	14,566	5	13	-	4	-	-
Okla.	5	4	18	-	9,456	9,335	30	11	1	2	1	-
Tex.	29	12	45	1	52,824	55,454	60	20	-	26	-	18
MOUNTAIN	11	-	20	3	20,873	25,302	21	8	7	2	-	2
Mont.	-	-	-	-	863	919	1	-	-	-	-	-
Idaho	5	-	-	-	951	1,127	-	1	1	-	-	1
Wyo.	-	-	-	-	611	575	-	-	-	-	-	-
Colo.	1	-	10	1	5,686	6,884	5	3	1	-	-	-
N. Mex.	-	-	-	-	2,728	2,730	8	-	3	-	-	-
Ariz.	U	-	6	-	5,450	7,528	U	U	U	U	U	-
Utah	5	-	-	2	994	1,213	5	3	1	2	-	1
Nev.	-	-	4	-	3,590	4,326	2	1	1	-	-	-
PACIFIC	44	24	104	5	88,671	101,868	92	75	23	38	-	88
Wash.	10	1	10	-	7,375	8,440	6	2	4	3	-	7
Oreg.	-	-	3	-	5,053	6,059	7	7	-	-	-	1
Calif.	29	22	87	5	72,355	82,768	77	60	19	35	-	58
Alaska	1	1	3	-	2,199	2,563	-	-	-	-	-	1
Hawaii	4	-	1	-	1,689	2,036	2	6	-	-	-	21
Guam	U	-	-	-	83	78	U	U	U	U	U	-
P.R.	-	-	1	-	1,904	2,139	6	8	-	6	-	-
V.I.	-	-	-	-	148	134	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	245	293	U	U	U	U	U	12

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 28, 1982 and August 29, 1981 (34th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum 1982	1982	Cum 1982	Cum 1981	1982	Cum 1982	1982	Cum 1982	1982	1982	Cum 1982	Cum 1981
UNITED STATES	33	650	14	1,184	2,555	35	2,051	20	4,080	58	12	1,958	1,706
NEW ENGLAND	1	33	1	11	75	1	107	3	167	1	-	18	112
Maine	-	-	-	-	5	-	8	-	36	-	-	-	33
N.H.	-	1	-	2	6	-	15	-	12	-	-	8	44
Vt.	-	-	-	2	2	-	6	-	7	-	-	-	-
Mass.	-	21	1	4	54	-	27	1	80	1	-	6	23
R.I.	-	2	-	-	-	-	11	1	15	-	-	1	-
Conn.	1	9	-	3	8	1	40	1	17	-	-	3	12
MID. ATLANTIC	12	103	-	157	811	9	373	-	255	17	1	92	200
Upstate N.Y.	-	21	-	110	207	1	130	-	56	5	1	45	94
N.Y. City	7	36	-	39	72	4	67	-	44	2	-	31	49
N.J.	1	25	-	4	54	1	75	-	36	1	-	16	46
Pa.	4	21	-	4	478	3	101	-	119	9	-	-	11
E.N. CENTRAL	-	39	2	73	79	5	241	5	2,150	5	2	161	356
Ohio	-	9	-	1	15	1	88	-	1,556	1	-	-	3
Ind.	-	1	-	2	8	-	22	-	37	-	-	27	123
Ill.	-	6	-	23	23	3	66	2	171	-	-	57	88
Mich.	-	21	2	47	30	1	53	-	294	3	-	48	34
Wis.	-	2	-	-	3	-	12	3	92	1	2	29	108
W.N. CENTRAL	2	19	-	49	10	4	91	-	542	3	-	55	76
Minn.	-	2	-	-	3	1	22	-	416	-	-	5	7
Iowa	1	6	-	-	1	-	5	-	30	-	-	-	4
Mo.	-	5	-	2	1	-	26	-	16	2	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	1	12	-	-	-	-	-	1
Kans.	1	2	-	44	1	2	16	-	79	1	-	11	62
S. ATLANTIC	1	99	-	37	358	8	417	1	234	7	-	70	130
Del.	-	4	-	-	-	-	-	-	10	-	-	1	1
Md.	-	15	-	2	5	-	25	-	24	5	-	33	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	-	28	-	14	7	1	49	1	33	-	-	13	5
W. Va.	-	6	-	3	9	-	8	-	87	-	-	1	22
N.C.	-	3	-	-	3	-	79	-	11	-	-	1	5
S.C.	-	4	-	-	2	4	51	-	13	-	-	1	8
Ga.	1	14	-	-	108	1	87	-	11	1	-	6	35
Fla.	-	21	-	17	223	2	116	-	45	1	-	14	53
E.S. CENTRAL	-	7	-	8	5	1	135	2	41	3	-	44	28
Ky.	-	4	-	1	1	-	24	2	14	-	-	26	19
Tenn.	-	-	-	6	2	-	56	-	15	2	-	2	8
Ala.	-	-	-	-	2	-	45	-	6	1	-	-	1
Miss.	-	3	-	1	-	1	10	-	6	-	-	16	-
W.S. CENTRAL	2	48	1	39	836	5	247	1	166	5	2	104	143
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	3
La.	1	4	-	2	2	2	51	-	5	-	-	1	9
Okla.	1	7	1	21	5	-	25	-	-	2	-	3	-
Tex.	-	34	-	16	828	3	159	1	155	3	2	99	131
MOUNTAIN	-	17	-	8	33	-	96	3	81	1	-	75	82
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	1	-	6	3
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	7
Colo.	-	8	-	6	9	-	41	-	15	-	-	6	30
N. Mex.	-	2	-	-	8	-	14	-	-	-	-	6	5
Ariz.	U	3	U	2	5	U	16	U	33	U	U	14	19
Utah	-	2	-	-	-	-	8	3	19	-	-	20	5
Nev.	-	-	-	-	10	-	2	-	6	-	-	11	10
PACIFIC	15	285	10	802	348	2	344	5	444	16	7	1,339	579
Wash.	-	14	-	34	3	1	37	-	61	-	-	37	88
Oreg.	-	9	-	15	4	-	67	-	-	-	-	6	50
Calif.	15	260	10	748	339	1	227	4	368	2	7	1,283	426
Alaska	-	-	-	1	-	-	10	-	6	-	-	5	1
Hawaii	-	2	-	4	2	-	3	1	9	14	-	8	14
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	4	93	262	-	7	3	60	-	-	7	3
V.I.	-	-	-	-	24	-	-	1	2	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	4	U	U	-	-

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 28, 1982 and August 29, 1981 (34th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	21,348	19,854	539	16,653	149	14	255	21	757	4,114
NEW ENGLAND	356	388	25	452	4	-	16	-	8	32
Maine	3	3	2	38	-	-	-	-	-	23
N.H.	1	12	3	15	-	-	-	-	1	-
Vt.	1	13	1	10	-	-	2	-	-	-
Mass.	244	259	12	295	4	-	12	-	4	5
R.I.	19	23	-	18	-	-	-	-	2	-
Conn.	88	78	7	76	-	-	2	-	1	4
MID. ATLANTIC	2,966	2,923	113	2,798	7	2	39	-	28	120
Upstate N.Y.	294	262	6	484	7	-	6	-	9	61
N.Y. City	1,776	1,750	95	1,071	-	2	23	-	1	-
N.J.	408	404	12	548	-	-	6	-	12	8
Pa.	488	507	U	695	-	-	4	-	6	51
E.N. CENTRAL	1,118	1,393	75	2,553	1	1	21	1	74	446
Ohio	198	192	8	436	-	1	10	1	69	65
Ind.	133	153	5	322	-	-	-	-	-	65
Ill.	538	752	37	1,057	-	-	3	-	5	231
Mich.	185	232	22	600	-	-	7	-	-	4
Wis.	64	64	3	138	1	-	1	-	-	81
W.N. CENTRAL	369	407	29	494	20	-	9	2	25	908
Minn.	74	137	5	87	-	-	5	-	-	161
Iowa	21	16	2	54	1	-	1	-	4	288
Mo.	218	221	18	236	14	-	1	1	9	87
N. Dak.	7	7	-	9	-	-	-	-	-	77
S. Dak.	1	2	1	20	-	-	-	-	4	71
Nebr.	11	5	-	20	2	-	1	-	1	103
Kans.	37	19	3	68	3	-	1	1	7	121
S. ATLANTIC	5,813	5,218	124	3,445	10	1	34	7	418	731
Del.	10	8	-	33	-	-	-	-	-	2
Md.	315	390	6	397	1	-	9	2	43	35
D.C.	327	423	6	139	-	-	-	-	-	-
Va.	399	461	12	383	2	-	2	1	63	371
W. Va.	20	16	3	104	-	-	3	-	7	36
N.C.	446	397	13	543	-	1	1	3	179	52
S.C.	344	336	9	308	6	-	3	-	90	43
Ga.	1,188	1,332	34	532	-	-	-	1	34	142
Fla.	2,764	1,855	41	1,006	1	-	16	-	2	50
E.S. CENTRAL	1,492	1,302	40	1,520	6	-	14	6	64	483
Ky.	78	72	19	400	-	-	-	-	1	97
Tenn.	411	489	12	487	4	-	2	4	41	281
Ala.	544	363	9	429	-	-	9	2	10	103
Miss.	459	378	-	204	2	-	3	-	12	2
W.S. CENTRAL	5,580	4,708	51	2,007	78	-	25	4	126	787
Ark.	138	100	7	220	50	-	3	2	22	107
La.	1,270	1,107	4	309	3	-	3	-	-	27
Okla.	119	110	2	253	23	-	2	-	65	146
Tex.	4,053	3,391	38	1,225	2	-	17	2	39	507
MOUNTAIN	538	514	3	452	17	-	11	-	9	179
Mont.	3	11	-	27	1	-	-	-	2	67
Idaho	24	17	-	23	1	-	-	-	2	7
Wyo.	14	7	-	2	2	-	-	-	1	13
Colo.	147	153	1	50	3	-	3	-	1	32
N. Mex.	136	93	-	86	1	-	-	-	1	13
Ariz.	115	123	U	194	-	U	5	U	-	32
Utah	15	20	-	25	9	-	2	-	-	12
Nev.	84	90	2	45	-	-	1	-	2	3
PACIFIC	3,116	2,801	79	2,932	6	10	86	1	5	428
Wash.	100	112	3	183	1	-	3	-	-	4
Oreg.	73	61	1	119	-	-	3	-	1	2
Calif.	2,856	2,572	74	2,375	4	10	77	1	4	345
Alaska	8	10	-	57	1	-	1	-	-	77
Hawaii	79	46	1	198	-	-	2	-	-	-
Guam	1	-	U	14	-	U	-	U	-	-
P.R.	443	434	1	256	-	-	2	-	-	36
V.I.	17	13	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	85	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending August 28, 1982 (34th week)

Reporting Area	All Causes, By Age (Years): All Ages	≥65	45-64	25-44	1-24	< 1	P&I** Total
NEW ENGLAND	657	453	130	27	22	25	43
Boston, Mass	172	108	32	13	8	11	18
Bridgeport, Conn	50	36	7	3	2	2	2
Cambridge, Mass	31	25	6	-	-	-	3
Fall River, Mass	28	23	3	1	1	-	1
Hartford, Conn	61	37	18	3	2	1	1
Lowell, Mass	31	21	9	-	1	-	-
Lynn, Mass	22	14	8	-	-	-	-
New Bedford, Mass	18	15	2	1	-	-	-
New Haven, Conn	51	39	2	-	4	6	-
Providence, R.I.	48	35	10	-	2	1	3
Somerville, Mass	14	11	2	-	1	-	2
Springfield, Mass	48	24	19	3	-	2	7
Waterbury, Conn	27	19	6	1	-	1	1
Worcester, Mass	56	46	6	2	1	1	5
MID. ATLANTIC	2,291	1,472	532	173	63	50	100
Albany, N.Y.	48	33	10	4	-	1	2
Allentown, Pa	19	15	4	-	-	-	-
Buffalo, N.Y.	129	76	34	9	5	5	5
Camden, N.J.	42	20	18	1	1	2	3
Elizabeth, N.J.	30	25	4	1	-	-	4
Erie, Pa †	34	22	9	2	-	1	2
Jersey City, N.J.	45	31	12	2	-	-	1
N.Y. City, N.Y.	1,227	788	268	103	39	29	42
Newark, N.J.	81	42	25	9	3	2	8
Paterson, N.J.	31	16	11	2	1	1	3
Philadelphia, Pa †	202	118	55	22	6	1	17
Pittsburgh, Pa †	97	57	28	7	3	2	4
Reading, Pa	23	22	1	-	-	-	-
Rochester, N.Y.	65	47	12	3	2	1	1
Schenectady, N.Y.	22	16	2	1	1	2	1
Scranton, Pa †	38	28	9	1	-	-	2
Syracuse, N.Y.	84	58	20	2	1	3	1
Trenton, N.J.	29	25	3	-	1	-	2
Utica, N.Y.	20	14	4	2	-	-	-
Yonkers, N.Y.	25	19	3	2	-	-	2
E.N. CENTRAL	2,099	1,302	503	144	78	72	45
Akron, Ohio	69	50	12	4	2	1	-
Canton, Ohio	36	26	8	2	-	-	3
Chicago, Ill	539	316	118	45	30	30	8
Cincinnati, Ohio	89	53	25	5	1	5	4
Cleveland, Ohio	163	95	54	8	5	1	1
Columbus, Ohio	137	81	35	12	3	6	4
Dayton, Ohio	97	65	20	6	2	4	-
Detroit, Mich	242	134	63	27	11	7	5
Evansville, Ind	38	20	15	2	1	-	-
Fort Wayne, Ind	52	34	9	3	1	5	3
Gary, Ind	13	6	4	1	2	-	2
Grand Rapids, Mich §	51	49	-	1	-	1	1
Indianapolis, Ind	146	89	37	6	6	8	2
Madison, Wis	30	23	5	1	1	-	1
Milwaukee, Wis	114	76	25	7	4	2	-
Peoria, Ill	35	20	12	2	1	-	5
Rockford, Ill	38	27	10	-	1	-	1
South Bend, Ind	41	27	9	3	1	1	3
Toledo, Ohio	114	71	31	7	4	1	2
Youngstown, Ohio	55	40	11	2	2	-	-
W.N. CENTRAL	698	468	137	48	23	21	27
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn	36	29	7	-	-	-	2
Kansas City, Kans	37	21	9	4	1	2	1
Kansas City, Mo	119	70	32	9	6	2	5
Lincoln, Nebr	32	25	4	2	1	-	-
Minneapolis, Minn	87	50	16	11	5	5	4
Omaha, Nebr	84	56	12	8	4	4	5
St. Louis, Mo	135	84	33	11	3	4	7
St. Paul, Minn	54	42	8	1	-	3	1
Wichita, Kans	61	40	16	2	2	1	2
S. ATLANTIC	1,431	811	396	114	49	60	34
Atlanta, Ga	139	81	36	10	11	1	2
Baltimore, Md	412	214	135	38	10	15	6
Charlotte, N.C.	72	43	15	6	3	4	1
Jacksonville, Fla	98	56	30	5	5	2	4
Miami, Fla	122	67	28	14	2	11	1
Norfolk, Va	50	26	11	7	2	4	1
Richmond, Va	81	46	23	5	3	4	10
Savannah, Ga	41	25	12	3	1	-	3
St. Petersburg, Fla	94	76	14	1	1	2	3
Tampa, Fla	70	46	15	4	2	3	2
Washington, D.C.	191	98	58	16	6	13	1
Wilmington, Del	61	33	19	5	3	1	-
E.S. CENTRAL	706	405	178	66	24	35	22
Birmingham, Ala	105	52	36	7	2	8	2
Chattanooga, Tenn	57	38	11	6	2	-	3
Knoxville, Tenn	33	23	6	4	-	-	-
Louisville, Ky	115	55	35	15	3	7	3
Memphis, Tenn	158	92	41	10	4	11	4
Mobile, Ala	81	45	18	11	6	1	1
Montgomery, Ala	31	18	5	2	-	6	2
Nashville, Tenn	128	82	26	11	7	2	7
W.S. CENTRAL	1,199	657	304	104	69	62	38
Austin, Tex	39	27	8	2	1	1	5
Baton Rouge, La	32	14	10	2	5	1	4
Corpus Christi, Tex	29	18	8	2	-	1	-
Dallas, Tex	232	128	59	23	12	10	2
El Paso, Tex	47	25	12	5	2	2	2
Fort Worth, Tex	96	60	19	4	5	8	5
Houston, Tex	210	97	53	27	15	18	3
Little Rock, Ark	70	42	17	4	4	3	5
New Orleans, La	118	63	34	12	7	2	-
San Antonio, Tex	150	82	40	12	7	9	6
Shreveport, La	75	40	24	5	3	3	1
Tulsa, Okla	101	61	20	6	8	4	5
MOUNTAIN	596	344	138	57	31	26	20
Albuquerque, N.Mex	70	37	17	5	8	3	1
Colo. Springs, Colo	22	14	5	1	2	-	2
Denver, Colo	123	75	25	13	5	5	2
Las Vegas, Nev	72	39	15	15	3	-	3
Ogden, Utah	15	11	2	-	1	1	1
Phoenix, Ariz	123	68	32	11	5	7	1
Pueblo, Colo	22	16	4	1	1	-	-
Salt Lake City, Utah	61	29	17	4	3	8	1
Tucson, Ariz	88	55	21	7	3	2	9
PACIFIC	1,649	1,037	371	125	69	47	90
Berkeley, Calif	14	8	4	2	-	-	1
Fresno, Calif	61	40	12	2	3	4	1
Glendale, Calif	24	18	4	2	-	-	1
Honolulu, Hawaii	70	42	16	6	4	2	5
Long Beach, Calif	90	55	27	4	2	2	4
Los Angeles, Calif	491	322	92	45	20	12	21
Oakland, Calif	62	32	18	4	6	2	2
Pasadena, Calif	27	17	6	3	-	1	2
Portland, Oreg	96	60	22	8	2	4	9
Sacramento, Calif	63	36	17	3	5	2	1
San Diego, Calif	146	84	45	9	6	2	13
San Francisco, Calif	115	71	27	9	4	4	1
San Jose, Calif	183	114	41	14	9	5	17
Seattle, Wash	122	81	25	10	5	1	2
Spokane, Wash	51	36	7	3	3	2	6
Tacoma, Wash	34	21	8	1	-	4	4
TOTAL	11,328††	6,949	2,089	858	428	398	419

---

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

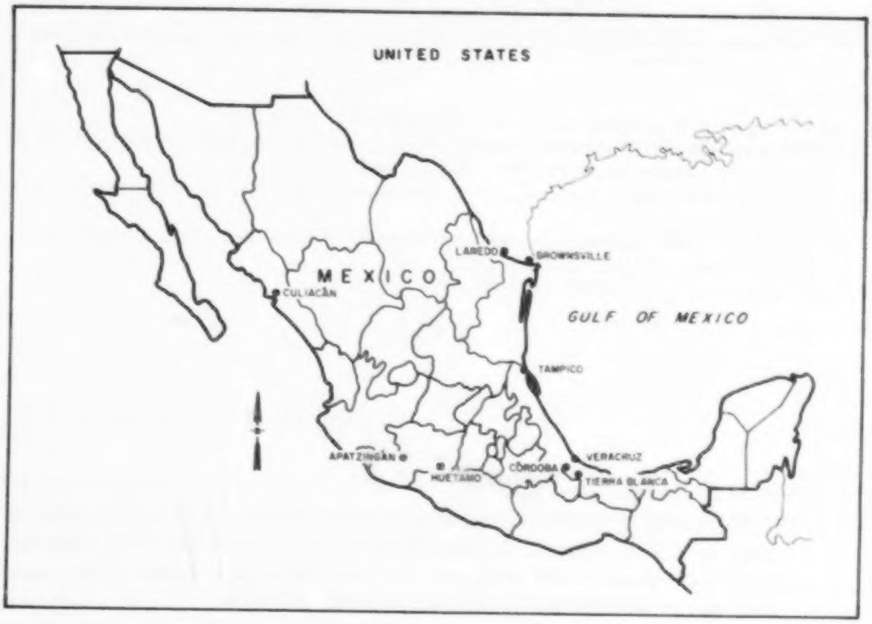
Dengue – Continued

The first acute-phase specimens were inoculated into *Toxorhynchites* mosquitoes. Three viruses were isolated and tentatively identified as dengue type 1 by type- specific monoclonal antibodies on mosquito brain tissue. This serotype was confirmed by complement fixation (CF) using antigen prepared from the bodies of infected mosquitoes.

Serology has been completed on the second group of specimens received. Ten of 16 paired specimens (62%) showed a ≥ 4-fold rise in dengue hemagglutination-inhibition (HI) antibodies between acute- and convalescent-phase specimens. Seven of these 10 patients had HI antibody titers compatible with primary dengue infection and follow-up serology by CF suggested that all were probably due to dengue type 1 virus. Four more dengue type 1 viruses were isolated from these specimens. The virus(es) responsible for the outbreaks in Michoacan and Sinaloa States are unknown at this time.

Because of the potential northward movement of dengue on Mexico's east coast, active virologic surveillance for dengue has been implemented in the Texas border towns of Brownsville and Laredo. Texas State Health Department health centers in each city will take five to 10 acute-phase serum specimens from suspected dengue cases each week and will send them to the San Juan Laboratories for virus isolation. In addition, health authorities in other border communities have been alerted to the possibility of increased dengue-like illness.

FIGURE 1. Areas of reported dengue-like illness, Mexico, 1982



Dengue – Continued

Entomological surveillance has also been intensified in Texas. Detailed surveys to determine the relative abundance and the breeding sites of *Aedes aegypti* will be undertaken in Brownsville, Laredo, Eagle Pass, and Corpus Christi. At this time, no implementation of virologic surveillance in other gulf coast cities is planned, but health authorities should be aware of the potential introduction of dengue from Mexico and the Caribbean (*1-3*).

Reported by L Cabrera-Coello, MD, Subdirector de Vigilancia y Epidemiologia, Secretaria de Salubridad y Asistencia, FP Miranda, E Zorrilla, MD, Instituto de Salubridad y Enfermedades Tropicales, Mexico City, Mexico; T Betz, MD, Texas State Health Dept; Vector-Borne Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Dengue type 1 outbreaks were widespread in Mexico in 1979 and 1980 (*4*) Since then, only sporadic transmission has been reported. Dengue types 1, 2, and 4 have been responsible for major epidemics in other parts of the Caribbean basin during the past 12 months (*1-3*). There is no evidence that either dengue type 2 or 4 is currently being transmitted in Mexico.

During 1980, epidemics of dengue were reported in several cities in northeastern Mexico (*4*). In August of that year, indigenous transmission of dengue virus in the United States was documented for the first time since 1945 (*5*). A total of 21 locally transmitted cases of dengue type 1 were confirmed in Texas from August to November 1980. For reasons not fully understood, however, transmission remained sporadic in Texas that year.

Because the principal vector mosquito, *A. aegypti*, is currently widespread in Texas border cities and in other major gulf coast urban areas, health authorities in these cities and states should be aware of the potential of dengue transmission in the United States.

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Erratum, Vol.31, No. 32

p. 434. In the article, "Arboviral Encephalitis—United States, 1982," the statement reading "Equine cases of EEE have been documented in South Carolina and Maryland" should have excluded Maryland. No equine cases of EEE have been documented in Maryland.

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31/35

CENTERS FOR DISEASE CONTROL

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

477 Rubella Vaccination During Pregnancy – United States, 1971-1981
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491 Subscription to *MMWR*

Countdown toward the elimination of measles in the United States

Year	Week 35	Weeks 1-35
1982	4	1,188
1981	7	2,562
1970	157	39,365
1960	1,234	399,852

Current Trends

Rubella Vaccination During Pregnancy — United States, 1971-1981

Since 1971, CDC has maintained a register of women who received rubella vaccine within the 3 months before or after conception, and who were prospectively followed to quantitate the risk of fetal abnormalities following exposure to the vaccine.

From January 1971 to December 1981, 730 pregnant women who received rubella vaccine either within 3 months before or within 3 months after their presumed dates of conception were reported to CDC. Five hundred thirty-eight of these women received either Cendehill[*] or HPV-77[†] vaccines; 189 received RA 27/3[§] vaccine, and three received rubella vaccine of an unknown type. At the time of vaccination, 215 women (29%) were known susceptible to rubella (no detectable rubella-specific antibodies); 42 (6%) were immune (presence of detectable rubella-specific antibodies), and 473 (65%) were of unknown immune status.

Exposure to Cendehill and HPV-77 vaccines (HPV-77:DE-5 and HPV-77:DK-12): The outcome of conception (live birth, stillbirth, spontaneous or induced abortion) was known for 500 of the 538 recipients of Cendehill or HPV-77 vaccines. Two hundred ninety (58%) of the vaccinees had full-term pregnancies (Table 1). None of the newborns had abnormalities com-

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[*] Distribution discontinued in the United States in December 1976

[†] Distribution discontinued in the United States in January 1979

[§] Distribution begun in the United States in January 1979

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

HE 20.7009:

Rubella – Continued

patible with congenital rubella syndrome (CRS)[¶]. Eight infants born to susceptible mothers or to mothers whose immune status was unknown showed evidence of infection by detection of rubella-specific IgM in cord blood, by the persistence of rubella-specific hemagglutination inhibition (HI) antibodies beyond 6 months of age, or by the isolation of rubella virus. All eight children, who are now 2 to 7 years of age, are growing and developing normally with no demonstrated signs or symptoms of CRS.

Rubella virus was isolated from the products of conception in 17 of 85 (20%) susceptible women who had received Cendehill or HPV-77 vaccines and who elected to have abortions. Six spontaneous abortions were reported among the 100 susceptible women who had received these vaccines and whose pregnancies proceeded without intervention.

The dates of vaccination and the estimated dates of conception (DOC) were available for 87 of the 94 susceptible women who had full-term pregnancies (Figure 1). Of these, 33 (38%) were vaccinated within 1 week before to 4 weeks after conception. All women who carried their pregnancies to term gave birth to infants who did not have any malformations compatible with the CRS, regardless of interval between vaccination and conception.

Exposure to RA 27/3 vaccine: The outcome of pregnancy was known for 177 of the 189 recipients of the RA 27/3 vaccine. One hundred fifty-three (86%) of the vaccinees had full-term pregnancies (Table 2). None of the resulting newborns had abnormalities compatible with CRS. Serologic evaluation (rubella HI titers and specific IgM on cord or neonatal blood specimens) was performed for 44 of the 49 infants whose mothers were susceptible, and for 76 of the 89 infants whose mothers were of unknown immune status. One infant born to a susceptible woman had a rubella-specific IgM antibody titer of 8 in the cord blood. Both mother and infant had HI titers of 128 at the time of birth; the infant's HI titer decreased to 16 at 2 months of age. The infant had no evidence of malformations either at birth or at the 6 month followup examination.

Rubella virus was isolated from the products of conception in only 1 of 25 (4%) susceptible women studied who had received RA 27/3 vaccine within 3 months of conception (12 cases

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[¶] Defined as any two complications listed in A or 1 from A and 1 from B

A. *Cataracts/congenital glaucoma* (either or both count as 1), *congenital heart disease, loss of hearing, pigmentary retinopathy.*

B. *Purpura, splenomegaly, jaundice* (with onset beginning 24 hours after birth), *microcephaly, mental retardation, meningoencephalitis, radiolucent bone disease.*

TABLE 1. Pregnancy outcomes for 538 recipients of Cendehill or HPV-77 vaccine — United States, through December 31, 1981*

Prevaccination immunity status	Total cases	Live births		Spontaneous abortions and stillbirths		Induced abortions		Outcome unknown	
		No.	%	No.	%	No.	%	No.	%
Susceptible	149	94	17.5	6	1.1	43	8.0	6	1.1
Immune	25	22	4.1	0	—	3	0.5	0	—
Unknown	364	174	32.3	18	3.4	140	26.0	32	6.0
TOTAL	538	290	53.9	24	4.5	186	34.5	38	7.1

*No women entered on the register during 1981 were vaccinated with Cendehill or HPV-77 vaccine.

Rubella – Continued

reported to CDC and 13 from the literature) (*1-3*). No spontaneous abortions were reported among the 49 susceptible women who had received RA 27/3 vaccine and whose pregnancies proceeded without intervention.

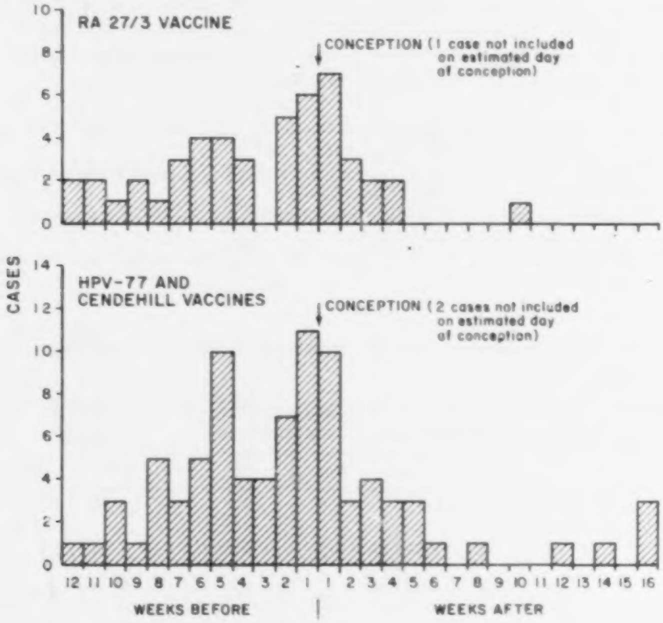
The dates of vaccination and estimated DOC were available for all of the 49 susceptible women who had full-term pregnancies (Figure 1). Twenty-one women (43%) were vaccinated within 1 week before to 4 weeks after conception. All women who had full-term pregnancies gave birth to infants who had no malformations compatible with CRS, regardless of interval between vaccination and conception.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: Since the licensure of live rubella virus vaccine in 1969, there has been concern that the attenuated vaccine virus poses teratogenic risks to the fetuses of pregnant recipients. A CDC register was set up to evaluate the risk; from that register, data are obtained through reports from physicians and state and local health departments, as well as directly from women vaccinated either within 3 months before or 3 months after conception. The patients are followed prospectively to determine the outcomes of the pregnancies.

During the highest risk period for viremia and fetal defects (1 week before to 4 weeks after conception) (*4,5*), 54 of the 143 (38%) susceptible mothers were vaccinated with one of the four vaccines. Neither these infants nor any of the others were born with CRS; therefore, the ob-

FIGURE 1. Rubella vaccination of susceptible women, by estimated date of conception (DOC)* and vaccine type, 1971-1981



*DOC estimated to be 14 days after first day of last menstrual period.

Rubella — Continued

served CRS risk to date is zero. The theoretical maximum risk for the occurrence of CRS in this group of children, based on the 95% confidence limits of the binomial distribution, may be as high as 3%. This overall maximum theoretical risk is far less than the 20% or greater risk associated with maternal infection with wild rubella virus during the first trimester of pregnancy (*6*).

In 1979, when RA 27/3 rubella vaccine replaced the other rubella vaccines, concern was raised that it might be more teratogenic than earlier rubella vaccines. Data from the CDC-maintained register thus far show no evidence that the RA 27/3 vaccine can cause defects compatible with CRS.

The 4% rubella virus isolation rate from products of conception for RA 27/3 vaccine is substantially lower than the 20% rate for the Cendehill and HPV-77 vaccines. Although limited, these data suggest there is probably no greater risk of placental or fetal infection from RA 27/3 vaccine than from Cendehill or HPV-77 vaccines (*7*).

Based on an earlier review of the data, the Immunization Practices Advisory Committee (ACIP) has stated that the risk of CRS following vaccination within 3 months of conception is so small as to be negligible (*8*). The additional data collected in 1981 support this statement. Rubella vaccination of a pregnant female should not in itself indicate abortion. A final decision, however, should rest with the patient and her physician.

Nevertheless, rubella vaccine should not be administered to pregnant females. Reasonable precautions before administering rubella vaccine to women of childbearing age include determining whether females are pregnant and excluding those who are. Non-pregnant women are advised not to become pregnant for 3 months after vaccination.

CDC encourages the reporting of all cases of rubella vaccination occurring within 3 months of conception so that the risks involved may be more completely defined for the presently licensed RA 27/3 vaccine. Laboratory services for serologic determination and for culture of abortion specimens are available at CDC for women who are entered on the register. Immunization Division personnel are available to discuss individual situations in detail.

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TABLE 2. Pregnancy outcomes for 189 recipients of RA27/3 vaccine — through December 31, 1981

Prevaccination immunity status	Total cases	Live births		Spontaneous abortions and stillbirths		Induced abortions		Outcome unknown	
		No.	%	No.	%	No.	%	No.	%
Susceptible	65	49	25.9	0	—	10	5.3	6	3.2
Immune	16	15	7.9	0	—	0	—	1	0.5
Unknown	108	89	47.1	2	1.1	12	6.3	5	2.7
TOTAL	189	153	80.9	2	1.1	22	11.6	12	6.4

Rubella – Continued

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International Notes

Cholera, 1981

As of April 5, 1982, a provisional total of 36,840 cholera cases had been reported worldwide for 1981, as compared with 42,614 in 1980. Altogether, 34 countries were infected, the same number as in 1980, and an additional eight countries reported only imported cases (Table 3). Only one new country was infected.

TABLE 3. Cases of cholera reported to WHO, 1981

Countries and areas	Total
AFRICA	
Benin	2
Burundi*	468
Cameroon, United Republic of*	209
Gabon	2
Kenya	2,424
Liberia	1,477
Mozambique	1,753
Niger	7†
Nigeria	107
Rwanda	20
South Africa	4,180
Swaziland	238
Tanzania, United Republic of	4,241
Zaire	2,379
Zambia	14
TOTAL	17,521 (7†)
AMERICA	
United States of America	21 (4†)
TOTAL	21 (4†)
ASIA	
Burma	28
Gaza Strip	161
Hong Kong	3†
India	4,681
Indonesia*	5,980
Iran	6,034
Japan	19 (14†)
ASIA (Cont'd)	
Jordon	870
Kuwait	8†
Malaysia	469
Nepal	24
Pakistan	4
Philippines*	150
Saudi Arabia	13 (4†)
Singapore	34 (2†)
Sri Lanka	574
Thailand	39
Viet Nam	157
West Bank	7 (2†)
TOTAL	19,255 (33†)
EUROPE	
Austria	2†
France	20 (19†)
Germany, Federal Republic of	4†
Netherlands	2†
Poland	1†
United Kingdom	12†
TOTAL	41 (40†)
OCEANIA	
Australia	2
TOTAL	2

*incomplete figures

†imported cases

Cholera – Continued

In Africa, the total number of countries with cholera declined from 16 in 1980 to 14 in 1981. A total of 17,521 cases were reported, as compared with 18,731 in 1980. However, the disease appeared to be more widespread in countries in southeastern Africa, and Swaziland reported infection for the first time during the present pandemic.

Seventeen countries in Asia reported cholera infection in 1981, as compared with 15 in 1980; the total number of cases was 19,255 (23,851 in 1980). There was a noticeable recrudescence of cholera in the Eastern Mediterranean area where six countries were infected, four more than in the previous year; the most severely affected were Iran and Jordan.

Cholera was again observed on the Gulf Coast of the United States, where 19 cases occurred, including an outbreak of 17 cases among employees of an oil rig in the coastal region of Texas. The outbreak was considered due to contamination of unchlorinated drinking water with drilling water and sewage containing *V. cholerae* 01 shed by the index case; the source of infection for the index case could not be determined. All the strains from the 31 cases occurring along the Gulf Coast since 1973 appear to be essentially identical, suggesting that the toxigenic *V. cholerae* 01 has persisted in this region for at least the last 8 years.

Oceania remained free of cholera in 1981, with the exception of two cases in Australia (at Lismore in New South Wales).

Apart from one isolated case in France, no indigenous cases were reported from Europe. There was, however, a significantly larger number of imported cases than in previous years.

Reported by WHO Weekly Epidemiologic Record 1982;57:131.

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	35th Week Ending			Cumulative, First 35 Weeks		
	September 4, 1982	September 5, 1981	Median 1977-1981	September 4, 1982	September 5, 1981	Median 1977-1981
Aseptic meningitis	266	465	372	4,430	5,242	3,302
Brucellosis	2	8	1	104	103	117
Encephalitis: Primary (arthropod-borne & unspec.)	36	55	54	703	770	596
Post-infectious	-	-	2	49	66	150
Gonorrhea: Civilian	15,505	21,407	20,833	628,537	671,094	659,399
Military	402	701	631	16,707	19,585	18,272
Hepatitis: Type A	281	453	540	14,503	16,983	19,190
Type B	302	384	337	13,868	13,679	11,102
Non A, Non B	21	N	N	1,428	N	N
Unspecified	137	210	208	5,956	7,323	6,731
Legionellosis	14	N	N	316	N	N
Leprosy	4	1	5	132	176	115
Malaria	24	28	25	680	967	499
Measles (rubeola)	4	7	68	1,188	2,562	12,789
Meningococcal infections: Total	44	39	32	2,096	2,535	1,930
Civilian	44	39	32	2,084	2,526	1,914
Military	-	-	-	12	9	14
Mumps	16	23	65	4,096	3,155	11,049
Pertussis	58	31	32	938	803	935
Rubella (German measles)	8	18	44	1,965	1,724	10,606
Syphilis (Primary & Secondary): Civilian	445	703	513	21,796	20,357	16,210
Military	9	10	9	281	250	206
Tuberculosis	317	541	541	16,969	17,943	18,673
Tularemia	9	12	9	159	168	139
Typhoid fever	9	5	14	264	344	320
Typhus fever, tick-borne (RMSF)	36	44	44	792	987	886
Rabies, animal	98	136	86	4,220	5,192	3,408

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism	54	Paralytic	3
Cholera	-	Psittacosis	84
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (La. 1)	54
Leptospirosis (Ark. 1, Tex. 3)	38	Trichinosis (Ohio 2, Mich. 1)	69
Plague (Oreg. 1)	11	Typhus fever, flea-borne (endemic, murine)	24

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 4, 1982 and September 5, 1981 (35th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum 1982	Cum 1982	Cum 1982	Cum 1982	Cum 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	266	104	703	49	628,537	671,094	281	302	21	137	14	132
NEW ENGLAND	15	3	31	5	15,282	16,626	3	16	-	14	1	1
Maine	1	-	-	-	772	860	1	2	-	-	1	-
N.H.	2	-	5	-	448	597	-	1	-	1	-	-
Vt.	-	-	-	-	289	277	1	-	-	-	-	-
Mass.	4	-	12	-	6,932	6,977	1	5	-	13	-	-
R.I.	3	-	-	1	1,041	925	-	1	-	-	-	-
Conn.	5	3	14	4	5,800	6,990	-	7	-	-	-	1
MID. ATLANTIC	27	3	76	13	78,865	79,720	28	75	7	14	5	4
Upstate N.Y.	13	3	25	3	13,052	13,212	5	9	-	1	-	1
N.Y. City	4	-	14	-	32,776	33,055	16	49	-	7	-	1
N.J.	7	-	13	-	14,109	15,438	7	17	7	6	-	1
Pa.	3	-	24	10	18,928	18,015	U	U	U	U	5	1
E.N. CENTRAL	56	1	155	10	85,076	101,080	71	42	-	11	1	3
Ohio	27	1	62	4	24,581	32,328	25	11	-	3	1	-
Ind.	6	-	33	3	10,812	8,650	22	9	-	4	-	-
Ill.	-	-	9	1	19,607	28,894	5	4	-	-	-	3
Mich.	23	-	46	-	21,806	22,023	19	18	-	4	-	-
Wis.	-	-	5	2	8,270	9,185	-	-	-	-	-	-
W.N. CENTRAL	13	14	56	3	29,868	31,657	18	7	1	4	4	3
Minn.	-	1	20	1	4,314	4,846	2	1	-	-	1	1
Iowa	3	3	23	1	3,133	3,478	9	-	1	1	2	-
Mo.	2	4	6	-	14,235	14,655	6	-	-	3	1	1
N. Dak.	-	-	-	-	400	415	-	-	-	-	-	-
S. Dak.	-	1	-	1	825	877	-	1	-	-	-	1
Nebr.	4	2	4	-	1,836	2,436	1	2	-	-	-	-
Kans.	4	3	3	-	5,125	4,950	-	3	-	-	-	-
S. ATLANTIC	72	20	112	7	165,225	166,254	62	100	5	19	1	9
Del.	-	-	-	-	2,666	2,676	1	2	-	-	-	-
Md.	5	-	17	-	21,086	19,090	3	24	1	1	-	3
D.C.	-	-	-	-	9,321	9,620	-	1	-	-	-	-
Va.	15	7	23	1	13,127	15,250	-	15	-	1	-	1
W. Va.	1	-	7	-	1,857	2,503	4	-	-	-	-	-
N.C.	15	-	13	1	26,565	25,622	5	7	-	3	-	-
S.C.	1	2	-	-	16,178	16,143	13	10	1	4	-	-
Ga.	13	1	8	-	30,544	34,665	8	12	1	1	-	1
Fla.	22	10	44	5	43,881	40,685	28	29	2	9	1	4
E.S. CENTRAL	7	11	36	2	55,273	56,189	9	13	1	-	-	-
Ky.	2	-	-	-	7,484	6,954	4	2	-	-	-	-
Tenn.	4	6	16	-	21,581	21,227	2	5	1	-	-	-
Ala.	1	4	15	2	16,389	17,261	1	4	-	-	-	-
Miss.	-	1	5	-	9,719	10,747	2	2	-	-	-	-
W.S. CENTRAL	41	28	113	1	88,352	88,129	71	31	4	70	1	22
Ark.	7	5	8	-	7,264	6,594	2	1	-	7	-	-
La.	3	6	14	-	16,597	15,177	10	10	1	1	-	-
Okla.	3	4	18	-	9,711	9,583	3	3	3	2	1	-
Tex.	28	13	73	1	54,780	56,775	56	17	-	60	-	22
MOUNTAIN	17	-	20	3	21,510	26,117	13	14	2	3	-	2
Mont.	1	-	-	-	876	947	1	-	-	-	-	-
Idaho	-	-	-	-	993	1,165	2	-	-	-	-	1
Wyo.	-	-	-	-	629	606	-	-	-	-	-	-
Colo.	5	-	10	1	5,866	7,098	7	6	1	1	-	-
N. Mex.	1	-	-	-	2,790	2,789	2	-	1	-	-	-
Ariz.	U	-	6	-	5,655	7,836	U	U	U	U	U	-
Utah	10	-	-	2	1,032	1,264	-	1	-	-	-	1
Nev.	-	-	4	-	3,669	4,412	1	7	-	2	-	-
PACIFIC	18	24	104	5	89,086	105,322	6	4	1	2	1	88
Wash.	5	1	10	-	7,516	8,754	-	-	-	2	1	7
Oreg.	-	-	3	-	5,223	6,185	6	1	1	-	-	1
Calif.	U	22	87	5	72,355	85,678	U	U	U	U	U	58
Alaska	9	1	3	-	2,253	2,635	-	3	-	-	-	1
Hawaii	4	-	1	-	1,739	2,070	-	-	-	-	-	21
Guam	U	-	-	-	85	79	U	U	U	U	U	-
P.R.	2	-	1	-	1,924	2,209	15	15	-	9	-	-
V.I.	U	-	-	-	148	139	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	245	305	U	U	U	U	U	12

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 4, 1982 and September 5, 1981 (35th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	24	680	4	1,188	2,562	44	2,096	16	4,098	58	8	1,965	1,724
NEW ENGLAND	3	36	-	11	76	3	110	1	167	2	-	17	112
Maine	-	-	-	-	5	-	8	1	37	1	-	-	33
N.H.	-	1	-	2	6	-	15	-	12	-	-	8	44
Vt.	-	-	-	2	2	-	6	-	7	-	-	-	-
Mass.	1	22	-	4	55	1	28	-	79	1	-	5	23
R.I.	-	2	-	-	-	1	12	-	15	-	-	1	-
Conn.	2	11	-	3	8	1	41	-	17	-	-	3	12
MID. ATLANTIC	6	109	-	157	812	13	386	3	258	24	1	93	201
Upstate N.Y.	2	23	-	110	207	7	137	1	57	1	-	45	94
N.Y. City	2	38	-	39	73	3	70	1	45	4	-	31	50
N.J.	2	27	-	4	54	3	78	1	37	1	1	17	46
Pa.	-	21	-	4	478	-	101	-	119	18	-	-	11
E.N. CENTRAL	5	60	-	73	80	7	248	1	2,152	13	-	161	357
Ohio	2	11	-	1	16	1	89	-	1,556	8	-	-	3
Ind.	-	2	-	2	8	2	24	-	37	-	-	27	124
Ill.	-	11	-	23	23	1	67	1	173	5	-	57	88
Mich.	3	24	-	47	30	3	56	-	294	-	-	48	34
Wis.	-	2	-	-	3	-	12	-	92	-	-	29	108
W.N. CENTRAL	-	19	-	49	10	-	91	2	544	9	-	55	76
Minn.	-	2	-	-	3	-	22	2	418	7	-	5	7
Iowa	-	6	-	-	1	-	5	-	30	-	-	-	4
Mo.	-	5	-	2	1	-	26	-	16	1	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	1	-	1	-
Nebr.	-	3	-	3	4	-	12	-	-	-	-	-	1
Kans.	-	2	-	44	1	-	16	-	79	-	-	11	62
S. ATLANTIC	5	104	1	38	360	14	431	3	237	5	4	74	132
Del.	-	4	-	-	-	-	-	-	10	-	-	1	1
Md.	-	15	1	3	5	2	27	-	24	-	1	34	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	4	32	-	14	7	3	52	-	33	-	-	13	5
W. Va.	1	7	-	3	9	1	9	-	87	-	-	1	22
N.C.	-	3	-	-	3	3	82	-	11	2	-	1	5
S.C.	-	4	-	-	2	-	51	2	15	-	-	1	8
Ga.	-	14	-	-	108	4	91	1	12	1	3	9	35
Fla.	-	21	-	17	225	1	117	-	45	2	-	14	55
E.S. CENTRAL	-	7	-	8	5	3	138	5	46	2	-	44	34
Ky.	-	4	-	1	1	-	24	-	14	-	-	26	20
Tenn.	-	-	-	6	2	2	58	3	18	1	-	2	13
Ala.	-	-	-	-	2	1	46	2	8	1	-	-	1
Miss.	-	3	-	1	-	-	10	-	6	-	-	16	-
W.S. CENTRAL	2	50	3	42	837	2	249	1	167	3	3	107	143
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	3
La.	-	4	-	2	2	-	51	-	5	-	-	1	9
Okla.	-	7	3	24	5	-	25	-	-	-	-	3	-
Tex.	2	36	-	16	829	2	161	1	156	3	3	102	131
MOUNTAIN	1	18	-	8	33	-	97	-	81	-	-	75	85
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	-	-	6	4
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	9
Colo.	1	9	-	6	9	-	41	-	15	-	-	6	30
N. Mex.	-	2	-	-	8	-	14	-	-	-	-	6	5
Ariz.	U	3	U	2	5	U	17	U	33	U	U	14	19
Utah	-	2	-	-	-	-	8	-	19	-	-	20	5
Nev.	-	-	-	-	10	-	2	-	6	-	-	11	10
PACIFIC	2	287	-	802	349	2	346	-	444	-	-	1,339	584
Wash.	-	14	-	34	3	-	37	-	61	-	-	37	89
Oreg.	2	11	-	15	4	1	68	-	-	-	-	6	51
Calif.	U	260	U	748	340	U	227	U	368	U	U	1,283	429
Alaska	-	-	-	1	-	1	11	-	6	-	-	5	1
Hawaii	-	2	-	4	2	-	3	-	9	-	-	8	14
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	2	95	264	-	7	-	53	2	-	7	3
V.I.	U	-	U	-	24	U	-	U	2	U	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	4	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 4, 1982 and September 5, 1981 (35th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum 1982	Cum 1981	1982	Cum 1982	Cum 1982	1982	Cum 1982	1982	Cum 1982	Cum 1982
UNITED STATES	21,796	20,357	317	16,969	159	9	264	36	792	4,220
NEW ENGLAND	371	408	10	462	4		16		8	33
Maine	3	4	2	40						24
N.H.	1	12		15					1	
Vt.	1	13		10			2			
Mass.	248	266	4	299	4		12		4	5
R.I.	19	24	1	19					2	
Conn.	99	89	3	79			2		1	4
MID. ATLANTIC	3,025	2,979	56	2,854	7	5	44		28	128
Upstate N.Y.	304	279	13	497	7		6		9	62
N.Y. City	1,811	1,776	32	1,103			23		1	
N.J.	415	414	11	559		5	11		12	8
Pa.	495	510	U	695			4		6	58
E.N. CENTRAL	1,147	1,473	74	2,626	1	1	22	2	76	455
Ohio	197	196	10	446		1	11	2	71	65
Ind.	134	168	6	328						66
Ill.	538	787	32	1,089			3		5	238
Mich.	211	255	23	622			7			4
Wis.	67	67	3	141	1		1			82
W.N. CENTRAL	379	423	7	501	24	1	10	5	30	926
Minn.	76	145		87			5			164
Iowa	21	16		54	2		1		4	297
Mo.	226	228	6	242	16	1	2	1	10	88
N. Dak.	7	7		[illegible]						79
S. Dak.	1	2	1	21	1				4	71
Nebr.	11	5		20	2		1	1	2	104
Kans.	37	20		68	3		1	3	10	123
S. ATLANTIC	5,990	5,391	59	3,493	10		34	19	436	755
Del.	11	10		33						2
Md.	333	400	15	404	1		9		43	35
D.C.	331	427	1	140						
Va.	408	471	4	387	2		2	7	69	384
W. Va.	21	16	2	106			3		7	37
N.C.	476	413	10	550			1	6	185	55
S.C.	354	352	7	315	6		3	4	94	43
Ga.	1,231	1,380		532				2	36	145
Fla.	2,825	1,922	20	1,026	1		16		2	54
E.S. CENTRAL	1,518	1,355	55	1,575	6		14	4	68	498
Ky.	80	74	15	415					1	102
Tenn.	411	499	21	508	4		2	4	45	283
Ala.	568	391	9	438			9		10	108
Miss.	459	391	10	214	2		3		12	5
W.S. CENTRAL	5,688	4,944	47	2,054	82	2	27	5	131	806
Ark.	142	110	5	225	51		3		22	108
La.	1,296	1,138	16	325	3		3			27
Okla.	119	113		253	24		2	3	68	148
Tex.	4,131	3,583	26	1,251	4	2	19	2	41	523
MOUNTAIN	558	523	5	460	19		11	1	10	191
Mont.	3	11		27	2			1	3	67
Idaho	24	17		23	1				2	8
Wyo.	15	7		2	2				1	17
Colo.	155	159		50	3		3		1	34
N. Mex.	137	93	1	87	1				1	15
Ariz.	119	123	U	197		U	5	U		35
Utah	15	21		25	10		2			12
Nev.	90	92	4	49			1		2	3
PACIFIC	3,120	2,861	4	2,944	6		86		5	428
Wash.	100	117	3	186	1		3			4
Oreg.	77	63		119			3		1	2
Calif.	2,856	2,625	U	2,375	4	U	77	U	4	345
Alaska	8	10		65	1		1			77
Hawaii	79	46	1	199			2			
Guam			U	34		U		U		
P.R.	465	449		254			2			36
V.I.	17	13	U	1		U		U		
Pac. Trust Terr.			U	85		U		U		

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending September 4, 1982 (35th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	648	411	163	36	21	17	35
Boston, Mass	178	103	49	14	8	4	20
Bridgeport, Conn	43	25	14	1	2	1	1
Cambridge, Mass	26	18	7	1	-	-	1
Fall River, Mass	25	20	5	-	-	-	-
Hartford, Conn	50	33	12	3	-	2	2
Lowell, Mass	34	19	13	1	1	-	1
Lynn, Mass	25	19	3	3	-	-	-
New Bedford, Mass	27	20	6	1	-	-	-
New Haven, Conn	59	28	17	5	7	2	1
Providence, R.I.	52	36	8	3	1	4	4
Somerville, Mass	6	3	3	-	-	-	1
Springfield, Mass	49	34	9	2	-	4	2
Waterbury, Conn	28	20	7	-	1	-	-
Worcester, Mass	46	33	10	2	1	-	2
MID ATLANTIC	2,352	1,540	532	152	66	62	80
Albany, N.Y.	50	34	11	1	1	3	-
Allentown, Pa	10	8	2	-	-	-	-
Buffalo, N.Y.	115	83	24	5	3	-	6
Camden, N.J.	30	15	10	3	1	1	1
Elizabeth, N.J.	31	20	7	2	1	1	2
Erie, Pa †	36	24	10	2	-	-	3
Jersey City, N.J.	42	27	11	3	-	1	-
N.Y. City, N.Y.	1,288	858	261	92	42	35	30
Newark, N.J.	67	34	16	10	4	3	2
Paterson, N.J.	32	19	10	-	3	-	-
Philadelphia, Pa †	263	159	73	20	6	5	14
Pittsburgh, Pa †	51	30	17	2	1	1	4
Reading, Pa	33	24	5	2	-	2	3
Rochester, N.Y.	129	87	31	3	2	6	9
Schenectady, N.Y.	21	12	8	1	-	-	-
Scranton, Pa †	20	16	3	-	1	-	-
Syracuse, N.Y.	71	47	18	3	1	2	2
Trenton, N.J.	28	17	9	2	-	-	1
Utica, N.Y.	15	13	2	-	-	-	-
Yonkers, N.Y.	20	13	4	1	-	2	3
E.N. CENTRAL	2,064	1,292	514	128	61	68	54
Akron, Ohio	79	52	12	2	5	8	-
Canton, Ohio	26	16	7	1	1	1	2
Chicago, Ill	476	278	125	37	24	12	13
Cincinnati, Ohio	127	78	43	1	3	2	10
Cleveland, Ohio	146	87	41	12	2	4	2
Columbus, Ohio	134	84	34	8	4	4	3
Dayton, Ohio	100	62	23	7	3	5	1
Detroit, Mich	232	128	59	27	6	12	2
Evansville, Ind	46	31	11	3	1	-	1
Fort Wayne, Ind	42	34	4	2	-	2	-
Gary, Ind §	10	8	-	-	1	-	-
Grand Rapids, Mich	44	29	9	2	2	2	1
Indianapolis, Ind	175	98	57	9	4	7	5
Madison, Wis	41	26	8	4	1	2	4
Milwaukee, Wis	121	87	25	3	-	6	-
Peoria, Ill	24	16	6	2	-	-	4
Rockford, Ill §	38	38	-	-	-	-	1
South Bend, Ind	46	26	15	3	1	1	4
Toledo, Ohio	93	67	22	2	2	-	1
Youngstown, Ohio	64	47	13	3	1	-	-
W.N. CENTRAL	712	488	124	48	24	27	33
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn	24	14	5	1	-	4	3
Kansas City, Kans	32	20	6	3	1	2	-
Kansas City, Mo	106	80	17	4	3	2	4
Lincoln, Nebr	40	35	3	2	-	-	3
Minneapolis, Minn	92	60	20	8	3	1	1
Omaha, Nebr	86	56	20	2	4	4	4
St. Louis, Mo	153	85	37	19	3	9	10
St. Paul, Minn	68	48	9	4	4	3	1
Wichita, Kans	58	39	7	5	5	2	7
S. ATLANTIC	1,110	652	289	89	35	42	28
Atlanta, Ga	123	81	27	6	7	2	1
Baltimore, Md	155	99	39	5	5	7	2
Charlotte, N.C.	49	23	16	2	2	3	3
Jacksonville, Fla	103	62	28	6	3	4	-
Miami, Fla	121	56	40	15	1	9	1
Norfolk, Va	44	24	15	3	2	-	2
Richmond, Va	76	40	25	6	2	3	5
Savannah, Ga	30	23	6	1	-	-	-
St. Petersburg, Fla	83	67	10	2	1	3	4
Tampa, Fla	77	54	12	5	2	4	4
Washington, D.C.	201	102	55	33	8	3	4
Wilmington, Del	48	21	16	5	2	4	2
E.S. CENTRAL	683	413	164	53	21	32	33
Birmingham, Ala	88	41	19	14	4	10	2
Chattanooga, Tenn	45	30	10	2	2	1	4
Knoxville, Tenn	48	36	9	2	-	1	1
Louisville, Ky	104	55	31	9	4	5	6
Memphis, Tenn	175	106	49	10	7	3	10
Mobile, Ala	65	38	17	6	2	2	4
Montgomery, Ala	63	47	9	5	-	2	4
Nashville, Tenn	95	60	20	5	2	8	2
W.S. CENTRAL	1,249	664	301	116	100	67	40
Austin, Tex	49	23	12	9	4	1	1
Baton Rouge, La	60	34	17	3	2	4	1
Corpus Christi, Tex	41	23	10	3	1	4	2
Dallas, Tex	184	109	35	20	10	10	4
El Paso, Tex	56	35	11	3	1	5	2
Fort Worth, Tex	90	54	16	4	8	8	8
Houston, Tex	239	111	63	32	24	9	5
Little Rock, Ark	90	47	29	8	2	4	6
New Orleans, La	158	63	47	10	28	10	-
San Antonio, Tex	141	76	32	12	15	6	7
Shreveport, La	56	37	11	4	2	2	-
Tulsa, Okla	85	52	18	8	3	4	4
MOUNTAIN	558	344	124	45	30	15	24
Albuquerque, N.Mex	51	35	12	2	1	1	1
Colo. Springs, Colo	22	13	5	2	1	1	5
Denver, Colo	111	62	26	10	9	4	5
Las Vegas, Nev	51	29	14	5	3	-	2
Ogden, Utah	30	24	3	1	1	1	3
Phoenix, Ariz	140	82	38	10	7	3	-
Pueblo, Colo	13	10	2	-	1	-	2
Salt Lake City, Utah	52	34	7	4	3	4	-
Tucson, Ariz	88	55	17	11	4	1	6
PACIFIC	1,807	1,140	420	125	63	57	79
Berkeley, Calif	27	17	7	2	1	-	1
Fresno, Calif	94	60	15	2	9	8	3
Glendale, Calif	30	23	3	1	3	-	2
Honolulu, Hawaii	60	40	11	5	2	2	1
Long Beach, Calif	102	60	30	7	2	3	4
Los Angeles, Calif	529	317	135	44	23	9	17
Oakland, Calif	76	50	17	8	-	1	1
Pasadena, Calif	28	18	8	-	1	1	2
Portland, Oreg	103	69	25	3	1	5	9
Sacramento, Calif	64	41	15	4	3	1	3
San Diego, Calif	115	80	22	7	2	4	12
San Francisco, Calif	169	105	41	13	-	10	6
San Jose, Calif	173	103	39	15	8	7	11
Seattle, Wash	158	106	31	10	6	5	5
Spokane, Wash	37	23	9	4	1	-	2
Tacoma, Wash	42	28	12	-	1	1	-
TOTAL	11,183††	6,944	2,631	792	421	387	406

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages

§ Data not available. Figures are estimates based on average of past 4 weeks

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality April 1982		Estimated number of physician contacts April 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	170,860	899.9	97,736,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	7,560	39.8	5,131,000
Malignant neoplasms (140-208)	1,804,120	36,320	191.3	2,368,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	67,310	354.5	5,485,000
Suicides, homicides (E950-E978)	1,401,880	4,160	21.9	—
Chronic liver disease and cirrhosis (571)	301,070	2,350	12.4	142,000
Cerebrovascular diseases (430-438)	280,430	13,480	71.0	543,000
Pneumonia and influenza (480-487)	124,830	4,580	24.1	1,166,000
Diabetes mellitus (250)	117,340	2,720	14.3	2,768,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	5,700	30.0	1,920,000
Prenatal care[5]				2,340,000
Infant mortality[5]		3,500	11.9/1,000 live births	

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[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the mid-point of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 5, August 12, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 4, July 14, 1982, p. 1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 5, August 12, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, April 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 31, No. 4, July 14, 1982, p. 1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Perspectives in Disease Prevention and Health Promotion

State Action to Prevent Motor Vehicle Deaths and Injuries among Children and Adolescents

Motor vehicle fatalities (MVF) are the leading cause of lost years of potential life, and in 1980, accounted for 54,200 deaths (*1*). The National Transportation Safety Board estimates that although fatalities on American highways decreased by 4% in 1981, reversing a 5-year upward trend, 145 persons, including 12 children, die each day in vehicular collisions (*2*).

Among children ages 1 to 14, motor vehicle collisions are a major cause of injury and disability and are responsible for 20% of all deaths in that age group. In 1980, approximately 90,000 children under 6 years of age and 800,000 children 6 to 16 years of age were injured by motor vehicles (*3*). Over half the MVF among 1 to 14 year-olds occur among pedestrians. Of the MVF among 15 to 19 year-olds, 25% involve the teenagers as passengers; in another 25%, teenaged drivers are killed (*4*).

In an effort to reduce motor vehicle accidents and deaths, states have begun passing legislation pertaining to child restraints, alcohol use, and other issues related to the prevention of motor vehicle deaths and injuries.

Child restraints: In response to statistics indicating that restrained children are 50% to 70% less likely to be injured or killed in an auto accident than unrestrained children (*5*) and that back seat passengers are less likely to be injured than front seat passengers, 21 states have enacted laws requiring the use of, or have instituted public education programs on, safety seats or belts for children. Tennessee, which passed the first such law, requires parents of children under 4 years of age to use federally approved child restraint systems. The law became effective January 1, 1978, and active enforcement and public education campaigns have increased child restraint use in large metropolitan areas from 9% in 1977 to 32% in 1981. Injury rates in Tennessee among children under 4 years of age have decreased from 440.0 injuries per 100,000 children in 1979 to 306.1/100,000 in 1981, a 30% decrease, while death rates have decreased 55% from 7.72 deaths/100,000 children in 1979 to 3.5/100,000 in 1981 (*6*).

Sixteen of those 21 states, encompassing over 40% of the American population, have passed laws requiring parents to use car restraints for their children (*7*). Three (California, Indiana, and Maine) have passed laws requiring state agencies to conduct public information campaigns on the importance of child passenger safety. Hawaii has enacted a state income tax credit for purchase of a child safety restraint. In other states, child restraint legislation is pending.

To prevent motor vehicle deaths and injuries among adolescents and adults, many European countries as well as Australia, Canada, and New Zealand, have implemented mandatory, comprehensive safety belt use laws. In Victoria, Australia, safety belt use increased from approximately 15% to between 80% and 90% after enactment of legislation requiring use by all automobile occupants over age 8, and both MVF and injuries decreased. Although injuries have decreased among passengers under age 17, no decrease in fatalities has been noted (*8*). Statistics indicate that sustained enforcement and education are necessary to the continued use of restraints. In Ontario, Canada, belt use increased to 80% immediately after enactment of a safety belt use law, then decreased to 50%. When the law was actively enforced, use increased to 66% (*9*). In the United States, safety belt use by adolescents and adults can reduce fatalities by 50% and injuries by 65% (*5*). Michigan has introduced legislation requiring safety belts or passive restraints for all drivers and front-seat passengers.

Motor Vehicle Deaths – Continued

Alcohol use: Half of all deaths from motor vehicle crashes and one-third of accidents in which occupants receive serious injuries involve drivers with blood-alcohol concentrations of 0.10% or higher (*10*). Other drugs, either independently or in combination with alcohol, also contribute to vehicular accidents. Studies in England have found significant associations between use of minor tranquilizers and serious accidents (*11*). Consequently, several states have raised their legal drinking ages. In the mid-1970's, when Michigan lowered its legal drinking age to 18, both the number of establishments serving drinks and their hours of operation increased, as did the number of traffic accidents and MVF among 18 to 20 year-olds (*12*). In response to these findings, Michigan raised its legal drinking age to 21. Connecticut, Maryland, and New York, among others, have also raised their legal drinking ages. In addition, citizens' groups have encouraged state legislatures to pass laws restricting night driving by teenagers, imposing mandatory license suspension for driving while intoxicated, and imposing stiffer penalties for convicted offenders.

Motorcycle helmets: By 1975, as a result of a federal requirement, all but three states had enacted laws requiring helmet use for motorcyclists. In 1976 the federal requirement was repealed, and by 1982, nine states had no helmet laws and 22 had amended theirs to require helmets only for teenaged riders (*13*). Between 1976 and 1980, deaths from motorcycle accidents increased by 49%. Motorcyclists have a 7-fold greater chance of fatal injury per mile driven than automobile drivers, (*14*). Over 30% of fatal motorcycle accidents occur among persons under 20 years of age (*4*). In a recent study conducted by the Minnesota Department of Health, in conjunction with the Minnesota Department of Public Safety, the effects of helmet use were analysed using 159 head injury cases from motorcycle accidents. The protective effects of helmets were evident at all levels of injury severity, and the degree of protection increased with severity, a non-helmeted rider was twice as likely to acquire a minor head injury as a helmeted rider and approximately five times as likely to acquire a severe or critical injury (*15*).

Education: Other approaches to preventing MVF among teenagers include raising the driving age and instituting comprehensive driver education programs. In Connecticut, a person can only obtain a drivers license before age 18 if he completes an approved driver education course; by eliminating state funding for driver education, Connecticut decreased the number of adolescent drivers and thus the number of 16 and 17 year-olds involved in accidents (*16*). Programs sponsored by community, professional, and government organizations have indicated the need for research concerning the effectiveness of driver education and the methods of preventing pedestrian injuries/fatalities.

Motor vehicle accidents result not only in morbidity and mortality but also in social and economic losses—health care costs, lost school time, lost work time for parents, rehabilitation costs, and the long-term effects of permanent disability on health, educational achievement, and quality of life. The prevention of vehicular-related injuries and deaths among children and adolescents requires a combination of strategies: designing roads and automobiles to prevent accidents, improving cars and safety seats to reduce the consequences of accidents, eliminating hazards to pedestrians, preventing alcohol and drug use by drivers, and advocating use of child restraints and safety belts.

Reported by the Office of Program Planning and Evaluation, Office of the Director, CDC.

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Motor Vehicle Deaths – Continued

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MORBIDITY AND MORTALITY WEEKLY REPORT

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Countdown toward the elimination of measles in the United States

Year	Week 36	Weeks 1-36
1982	20	1,214
1981	19	2,581
1970	122	39,487
1960	725	400,582

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International Notes

Poliomyelitis – Taiwan

As of September 7, 1982, 388 cases of paralytic poliomyelitis have been reported to the health authorities from all counties in Taiwan. The first reported case of laboratory-confirmed type 1 paralytic poliomyelitis occurred in Tai Chung City with onset on May 29, 1982. Fifty-six percent of Taiwan's reported cases were among children under 2 years of age, and 15% were 2-4 years old. The youngest reported patient was 4 months old and the oldest was 32 years old. Vaccination status was known for 71% of patients: 56% of these had no prior polio vaccine, 37% had only one or two doses, and 7% had three or more doses. Twenty-nine type 1 polioviruses have been isolated from specimens from the 48 patients with paralytic disease that have been tested to date.

From 1975 through 1981, fewer than nine cases per year of paralytic poliomyelitis had been reported in Taiwan. The last year in which there were as many cases as are currently being reported was 1966 when there were 400 cases. Health authorities have undertaken a mass vaccination program utilizing trivalent oral polio vaccine directed, initially, at the population under 5 years of age and, subsequently, at persons through primary school age (up to 12 years).

Reported by Health Authorities, Taipei, Taiwan; Div of Viral Diseases, Center for Infectious Diseases, Quarantine Div, Immunization Div, Center for Prevention Svcs, CDC.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

HE 20.7009:

Current Trends

Influenza — Worldwide

Europe: The 1981-1982 European influenza season, which began with isolations of influenza B and influenza A(H1N1) and (H3N2) viruses in a few countries in November-December, 1981 (*1,2*), continued through the spring of 1982, with isolations of influenza B viruses in Belgium, Czechoslovakia, Hungary, and West Germany; isolations of influenza A(H1N1) viruses throughout eastern Europe (Czechoslovakia, East Germany, Hungary, and Rumania), as well as Scandinavia (Finland, Norway, and Sweden); and isolations of influenza A(H3N2) strains in Bulgaria, East Germany, and the Netherlands. In East Germany, morbidity associated with A(H3N2) activity approached epidemic levels in some districts; in the United Kingdom, influenza B activity increased considerably from what were originally low levels (*2*), and in several countries, local outbreaks of influenza A(H1N1) or influenza B were reported. Overall, however, the European influenza season had remarkably little activity.

Central and South America: In addition to the previously reported outbreak of influenza A(H3N2) in Trinidad from October to December 1981 (*2*), sporadic influenza B activity has occured in July and August, 1982, in Trinidad. Laboratory confirmation of influenza activity by virus isolations has also been obtained in the past year from Brazil, Colombia, and Peru. Influenza A(H1N1) strains were isolated in Lima, Peru, beginning in October 1981, and in Belem, Rio de Janeiro, and Sao Paulo, Brazil, from February to April 1982. These represent the minority of reported isolations. In Brazil, influenza B and influenza A(H3N2) viruses were recovered in approximately equivalent total numbers from March to June, with influenza B virus isolated more frequently in Rio de Janerio and influenza A(H3N2) virus isolated more frequently in Sao Paulo. During April 1982, influenza A(H3N2) strains were isolated in Bogota, Colombia. Despite active surveillance, no influenza viruses were recovered in Chile during the winter.

Asia, the Pacific, and Africa: Influenza A(H1N1) virus was isolated in Indonesia from December 1981 to February 1982 and in Qingdao, People's Republic of China (PRC) in February 1982. Virus of this subtype has not recently been isolated. In contrast, influenza B virus has been circulating throughout the past year. In Taiwan (Republic of China), influenza B viruses were isolated beginning in December 1981, increased to cause outbreaks peaking in March, and declined in activity in April and May, paralleling activity reported previously from Japan (*1,3*). Influenza B viruses were also isolated in Beijing and Fuxin city, Liaoning Province, PRC, in February and March 1982; in Hong Kong in March 1982; in Singapore in April and May; and in Indonesia from April to July. In Fiji, influenza B virus circulated from April to June and, in May, caused an outbreak among university students. The first sporadic isolate of influenza B virus in Australia during the season was reported in April, and by July and August, influenza B virus represented about one-half of isolates being recovered from epidemics. By the end of July, only sporadic isolations of influenza B virus had been reported from South Africa.

Circulation of influenza A(H3N2) viruses throughout the past year has been confirmed by virus isolation in the cities of Qingdao and Shanghai, PRC, in February and March 1982. In June, this virus was detected for the first time this year in Australia where approximately one-half of influenza isolates during epidemics in July and August have been influenza A(H3N2) strains. Influenza A(H3N2) viruses have been isolated in the Philippines and Singapore in July and predominanted in Jakarta, Indonesia, during July and August.

Antigenic analysis of the first isolates in Australia and Indonesia received from outbreaks during June and July has not indicated that new variants are associated with recent influenza activity. Preliminary findings show that strains appear similar to those that circulated in the

Influenza — Continued

United States during the past two winters.

Reported by WHO National Influenza Centers, Australia, Brazil, Chile, Colombia, Czechoslovakia, People's Republic of China, Peru, Sweden, Singapore, Caribbean Epidemiology Centre, Trinidad, USAF Diagnostic Virology Section, USAF School of Aerospace Medicine, San Antonio, Texas; NAMRU-2, Jakarta, Indonesia, National Institute of Health and Veterans Administration Hospital, Taipei, Taiwan; ROC; Virus Diseases Unit, WHO, Geneva; WHO Collaborating Center for Influenza, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: International surveillance of influenza during the past year has confirmed the continued circulation of influenza A(H3N2) strains, although they were rarely seen in the United States last winter. Influenza B viruses, which caused a major epidemic in the United States in 1979-1980 and low-level morbidity last winter, have been detected in all regions of the world. Influenza A(H1N1) viruses have been isolated relatively infrequently. Viruses of this subtype circulated widely among children and young adults in the United States in early 1977 and in a major epidemic of 1978-1979. They have also circulated during the past two winters in the United States, but to a much lesser extent than in 1977-1979. Results of international surveillance during the past several years have tended to demonstrate that, except when a major new strain appears, considerable differences exist between regions in patterns of virus prevalence within any one year, although over a several-year period, the combined experiences are similar. Thus, as one example, in 1979-1980, when influenza A(H3N2) viruses caused a major epidemic in the United States, many other countries had relatively low influenza activity. Because of the great disparity in influenza activity between different countries and the continued circulation of influenza A(H1N1), (H3N2) and influenza B strains during the past year, neither the likelihood of an epidemic in the United States next winter, nor the predominant influenza strain or strains, can be reliably predicted. This underscores the desirability of immunizing the high-risk population before winter with current vaccines (*4*) containing antigens representing all three influenza strains that have been prevalent worldwide. Although this year's vaccine composition is similar to last year's, revaccination of persons who received vaccine before the winter of 1981-1982 is recommended because of the anticipated decline in antibody titers that will have occurred in such persons before the 1982-1983 influenza season.

References

1. CDC. Influenza—United States, worldwide. MMWR 1982;30:634-5.
2. CDC. Influenza—worldwide. MMWR 1982;31:107.
3. CDC. Influenza—Japan. MMWR 1982;31:64.
4. CDC. Influenza vaccines 1982-1983. MMWR 1982;31:349-53.

International Notes

Spectinomycin-Resistant β-Lactamase-Producing *Neisseria gonorrhoeae*— England

Spectinomycin-resistant β-lactamase-producing strains of *Neisseria gonorrhoeae* have been isolated from a female, aged 23 years, and a male, aged 29 years, after treatment failure (ampicillin/probenecid followed by spectinomycin), although original isolates were found to be sensitive by disc tests. Both patients acquired the infection in London but are not known to be connected. The consort of the first case was traced and treated without development of spectinomycin resistance. Plasmid analysis of the strains showed that both carried Asian type plasmids.

Neisseria gonorrhoeae — Continued

Reported by Communicable Disease Report (London). 1982;32:31.

Editorial Note: Spectinomycin has been the recommended therapy for persons who have penicillinase producing *N. gonorrhoeae* (PPNG) infections and for those who have failed to respond to gonorrhea treatment (*1*). The first of two cases of spectinomycin-resistant PPNG identified in 1981 was reported to CDC by the United States Air Force in California in April 1981 (*2*). The Air Force conducted an intensive investigation overseas for additional cases related to this initial case; none was identified. The second case was identified in London in November 1981 (*3*). The 1981 cases and the two recent cases reported above have not been epidemiologically connected.

Spectinomycin-resistant gonococci are uncommon; the total number of reported cases is now eight, four with PPNG and four with non-PPNG. CDC continues to advise that all gonococcal isolates be tested for penicillinase production and that PPNG isolates be tested for spectinomycin resistance (*4*). Procedures for a provisional disc-diffusion technique are available (*5*). All spectinomycin-resistant gonococcal isolates should be forwarded to CDC through state health department laboratories; surveillance is essential to describe the distribution and trends of spectinomycin-resistant PPNG. For such cases, the recommended alternative therapies are: cefoxitin 2g intramuscularly (IM) plus probenecid 1g orally or cefotaxime 1g IM (*2*).

(Continued on page 501)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	36th Week Ending			Cumulative, First 36 Weeks		
	September 11 1982	September 12 1981	Median 1977-1981	September 11 1982	September 12 1981	Median 1977-1981
Aseptic meningitis	319	363	326	4,875	5,604	4,251
Brucellosis	3	4	5	110	107	124
Encephalitis: Primary (arthropod-borne & unspec.)	54	76	44	770	846	657
Encephalitis: Post-infectious	2	2	3	51	68	153
Gonorrhea: Civilian	15,807	17,814	18,876	647,439	688,908	677,783
Gonorrhea: Military	392	492	562	17,344	20,077	19,113
Hepatitis: Type A	423	425	535	15,048	17,413	19,814
Hepatitis: Type B	390	382	265	14,375	14,061	11,346
Hepatitis: Non A, Non B	45	N	N	1,488	N	N
Hepatitis: Unspecified	142	226	197	6,132	7,549	6,917
Legionellosis	9	N	N	332	N	N
Leprosy	2	1	1	136	177	115
Malaria	20	37	23	703	1,004	511
Measles (rubeola)	20	19	42	1,214	2,581	12,825
Meningococcal infections: Total	30	42	26	2,128	2,577	1,952
Meningococcal infections: Civilian	30	41	26	2,116	2,567	1,934
Meningococcal infections: Military	-	1	-	12	10	14
Mumps	22	55	55	4,131	3,210	11,096
Pertussis	32	34	49	975	837	1,040
Rubella (German measles)	17	25	44	1,987	1,749	10,650
Syphilis (Primary & Secondary): Civilian	484	543	495	22,346	20,900	16,705
Syphilis (Primary & Secondary): Military	13	7	5	295	257	216
Tuberculosis	477	515	470	17,575	18,458	19,143
Tularemia	8	13	8	168	181	144
Typhoid fever	2	7	9	268	351	334
Typhus fever, tick-borne (RMSF)	30	34	32	820	1,021	920
Rabies, animal	125	163	101	4,367	5,355	3,509

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism	55	Poliomyelitis: Paralytic	3
Cholera	-	Psittacosis (NYC 1, Calif. 1)	86
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (Md. 1, Calif. 1)	56
Leptospirosis (Tex 1, Hawaii 1)	40	Trichinosis (Utah 1)	70
Plague (Ariz. 2)	13	Typhus fever, flea-borne (endemic, murine)	24

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 11, 1982 and September 12, 1981 (36th week)

Reporting Area	Aseptic Menin-gitis	Brucel-losis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	319	110	770	51	647,439	688,908	423	390	45	142	9	136
NEW ENGLAND	30	3	33	5	15,634	16,984	4	17	1	4	1	1
Maine	1	-	-	-	786	876	-	-	-	-	1	-
N.H.	3	-	5	-	455	612	-	-	-	-	-	-
Vt.	-	-	-	-	300	281	1	1	-	-	-	-
Mass.	15	-	13	-	7,083	7,141	2	11	1	4	-	-
R.I.	10	-	-	1	1,064	976	-	1	-	-	-	-
Conn.	1	3	15	4	5,946	7,098	1	4	-	-	-	1
MID. ATLANTIC	49	3	85	13	81,527	81,623	59	70	3	8	1	4
Upstate N.Y.	18	3	28	3	13,436	13,739	14	9	1	1	-	1
N.Y. City	-	-	15	-	33,645	33,647	8	23	-	1	-	1
N.J.	20	-	16	-	15,000	15,695	9	13	2	3	1	1
Pa.	11	-	26	10	19,446	18,542	28	25	-	3	-	1
E.N. CENTRAL	26	1	163	10	87,011	103,821	55	35	1	8	4	3
Ohio	16	1	68	4	25,271	32,721	9	11	-	1	4	-
Ind.	1	-	35	3	10,943	9,007	24	9	1	4	-	-
Ill.	-	-	9	1	19,944	30,068	8	6	-	1	-	-
Mich.	9	-	46	-	22,447	22,610	14	9	-	2	-	3
Wis.	-	-	5	2	8,406	9,415	-	-	-	-	-	-
W.N. CENTRAL	12	14	61	4	30,986	32,510	14	6	-	1	-	3
Minn.	3	1	24	1	4,439	4,911	3	1	-	-	-	1
Iowa	3	3	24	1	3,255	3,594	1	-	-	-	-	-
Mo.	3	4	6	-	14,765	15,148	9	2	-	-	-	1
N. Dak.	-	-	-	-	416	419	-	-	-	-	-	-
S. Dak.	-	1	-	1	847	916	-	1	-	-	-	-
Nebr.	1	2	4	-	1,904	2,488	-	-	-	-	-	1
Kans.	2	3	3	1	5,360	5,034	1	2	-	1	-	-
S. ATLANTIC	57	22	119	8	169,616	170,345	49	56	5	24	2	9
Del.	1	-	-	-	2,752	2,716	2	2	2	-	-	-
Md.	10	-	18	-	21,553	19,451	3	11	-	1	1	3
D.C.	1	-	-	-	9,687	9,820	2	1	-	-	-	-
Va.	10	7	27	1	13,520	15,594	1	10	1	1	-	1
W. Va.	1	-	8	-	1,924	2,575	4	1	-	-	-	-
N.C.	15	-	13	1	27,320	26,256	6	10	-	8	-	-
S.C.	-	2	-	-	16,643	16,527	2	4	1	4	-	-
Ga.	-	3	8	-	31,389	35,479	-	-	-	-	-	1
Fla.	19	10	45	6	44,828	41,927	29	17	1	10	1	4
E.S. CENTRAL	19	11	38	2	57,090	57,616	27	36	5	3	-	-
Ky.	8	-	-	-	7,645	7,042	12	6	-	1	-	-
Tenn.	5	6	17	-	22,431	21,831	12	23	3	2	-	-
Ala.	5	4	15	2	17,037	17,779	3	7	2	-	-	-
Miss.	1	1	6	-	9,977	10,964	-	-	-	-	-	-
W.S. CENTRAL	43	29	122	1	90,216	90,875	70	49	2	62	1	22
Ark.	1	5	10	-	7,456	6,738	-	5	-	10	-	-
La.	5	7	15	-	16,674	15,615	9	3	1	4	-	-
Okla.	8	4	20	-	9,990	9,822	7	14	1	8	1	-
Tex.	29	13	77	1	56,096	58,700	54	27	-	40	-	22
MOUNTAIN	21	-	24	3	22,181	26,706	30	9	3	4	-	2
Mont.	-	-	-	-	907	968	1	-	-	-	-	-
Idaho	11	-	-	-	1,050	1,212	3	-	-	-	-	1
Wyo.	2	-	-	-	669	638	-	-	-	-	-	-
Colo.	-	-	14	1	5,992	7,268	3	4	1	1	-	-
N. Mex.	1	-	-	-	2,921	2,837	13	1	1	-	-	-
Ariz.	1	-	6	-	5,790	7,939	5	1	-	-	-	-
Utah	6	-	-	2	1,059	1,295	-	2	-	-	-	1
Nev.	-	-	4	-	3,793	4,549	5	1	1	3	-	-
PACIFIC	62	27	125	5	93,178	108,428	115	112	25	28	-	92
Wash.	8	1	10	-	7,746	9,046	6	13	7	2	-	7
Oreg.	3	-	3	-	5,392	6,409	8	9	2	-	-	1
Calif.	46	25	107	5	75,963	88,113	99	87	16	26	-	62
Alaska	4	1	3	-	2,291	2,703	1	1	-	-	-	1
Hawaii	1	-	2	-	1,786	2,157	1	2	-	-	-	21
Guam	U	-	-	-	81	80	U	U	U	U	U	-
P.R.	2	-	1	-	1,924	2,284	-	2	-	1	-	1
V.I.	-	-	-	-	161	147	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	245	315	U	U	U	U	U	12

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 11, 1982 and September 12, 1981 (36th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	20	703	20	1,214	2,581	30	2,128	22	4,131	32	17	1,987	1,749
NEW ENGLAND	1	37	-	11	76	3	114	2	169	2	1	18	113
Maine	-	-	-	-	5	1	9	1	38	-	-	-	33
N.H.	-	1	-	2	6	-	15	1	13	-	-	8	45
Vt.	-	-	-	2	2	-	7	-	7	-	-	-	-
Mass.	1	23	-	4	55	-	28	-	79	2	1	6	23
R.I.	-	2	-	-	-	1	13	-	15	-	-	1	-
Conn.	-	11	-	3	8	1	42	-	17	-	-	3	12
MID. ATLANTIC	3	111	1	158	821	6	390	5	263	11	3	96	206
Upstate N.Y.	-	23	-	110	207	1	138	2	59	1	2	47	98
N.Y. City	2	40	1	40	74	2	72	-	45	2	-	31	51
N.J.	-	26	-	4	56	1	79	1	38	-	-	17	46
Pa.	1	22	-	4	484	2	101	2	121	8	1	1	11
E.N. CENTRAL		50	1	74	80	2	250	4	2,159	2	-	164	365
Ohio	-	11	-	1	16	1	90	-	1,556	-	-	-	3
Ind.	-	2	-	2	8	-	24	-	37	-	-	27	127
Ill.	-	11	-	23	23	1	68	1	174	2	-	58	90
Mich.	-	24	1	48	30	-	56	2	296	-	-	48	34
Wis.	-	2	-	-	3	-	12	1	96	-	-	31	111
W.N. CENTRAL	-	19	-	49	10	2	93	1	545	-	1	56	76
Minn.	-	2	-	-	3	-	22	-	418	-	-	5	7
Iowa	-	6	-	-	1	2	7	1	31	-	-	-	4
Mo.	-	5	-	2	1	-	26	-	16	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	12	-	-	-	-	-	1
Kans.	-	2	-	44	1	-	16	-	79	-	1	12	62
S. ATLANTIC	2	106	-	38	363	10	441	2	239	9	-	74	132
Del.	-	4	-	-	-	-	-	-	10	-	-	1	1
Md.	1	16	-	3	5	-	27	1	25	-	-	34	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	-	32	-	14	7	1	53	-	33	1	-	13	5
W. Va.	-	7	-	3	9	-	9	-	87	-	-	1	22
N.C.	-	3	-	-	3	2	84	1	12	5	-	1	5
S.C.	-	4	-	-	2	-	51	-	15	-	-	1	8
Ga.	-	14	-	-	111	-	91	-	12	-	-	9	35
Fla.	1	22	-	17	225	7	124	-	45	3	-	14	55
E.S. CENTRAL	-	7	-	8	5	1	139	1	47	3	-	44	35
Ky.	-	4	-	1	1	-	24	1	15	-	-	26	21
Tenn.	-	-	-	6	2	1	59	-	18	3	-	2	13
Ala.	-	-	-	-	2	-	46	-	8	-	-	-	1
Miss.	-	3	-	1	-	-	10	-	6	-	-	16	-
W.S. CENTRAL	2	52	2	44	842	3	252	5	172	3	-	107	147
Ark.	1	4	-	-	1	-	12	-	6	-	-	1	3
La.	-	4	-	2	2	1	52	1	6	-	-	1	9
Okla.	1	8	2	28	5	-	25	-	-	-	-	3	-
Tex.	-	36	-	16	834	2	163	4	160	3	-	102	135
MOUNTAIN	3	21	1	11	33	1	98	1	84	1	1	78	87
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	1	4	-	-	6	4
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	10
Colo.	-	9	-	6	9	-	41	-	15	-	-	8	30
N. Mex.	1	3	-	-	8	-	14	-	-	1	-	6	5
Ariz.	2	5	1	5	5	1	18	-	35	-	-	14	20
Utah	-	2	-	-	-	-	8	-	19	-	1	21	5
Nev.	-	-	-	-	10	-	2	-	6	-	-	11	10
PACIFIC	9	300	15	821	351	2	351	1	453	1	11	1,352	588
Wash.	1	15	-	34	3	-	37	-	61	-	-	37	89
Oreg.	-	11	-	15	4	-	68	-	-	-	-	6	52
Calif.	8	272	15	767	340	1	231	1	377	1	11	1,296	431
Alaska	-	-	-	1	-	-	11	-	6	-	-	5	1
Hawaii	-	2	-	4	4	1	4	-	9	-	-	8	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	7	102	269	1	8	1	54	1	-	7	3
V.I.	-	-	-	-	24	-	-	1	3	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	4	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 11, 1982 and September 12, 1981 (36th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	22,346	20,900	477	17,575	168	2	268	30	820	4,367
NEW ENGLAND	379	409	11	473	5	-	16	-	8	36
Maine	3	4	-	40	-	-	-	-	-	26
N.H.	1	12	-	15	-	-	-	-	1	-
Vt.	2	13	2	12	-	-	2	-	-	1
Mass.	254	266	6	305	5	-	12	-	4	5
R.I.	19	24	1	20	-	-	-	-	2	-
Conn.	100	90	2	81	-	-	2	-	1	4
MID. ATLANTIC	3,086	3,039	79	2,985	7	1	45	3	31	137
Upstate N.Y.	309	279	18	515	7	-	6	1	10	67
N.Y. City	1,845	1,803	29	1,132	-	1	24	-	1	-
N.J.	427	426	16	575	-	-	11	-	12	11
Pa.	501	531	16	743	-	-	4	2	8	59
E.N. CENTRAL	1,161	1,519	49	2,673	1	-	22	1	77	463
Ohio	209	200	10	456	-	-	11	1	72	67
Ind.	135	184	15	343	-	-	-	-	-	69
Ill.	538	807	11	1,100	-	-	3	-	5	241
Mich.	211	259	10	630	-	-	7	-	-	4
Wis.	68	69	3	144	1	-	1	-	-	82
W.N. CENTRAL	387	432	10	511	25	-	10	1	31	952
Minn.	79	148	-	87	-	-	5	-	-	164
Iowa	21	16	-	54	2	-	1	-	4	306
Mo.	231	234	7	249	17	-	2	-	10	90
N. Dak.	7	7	-	9	-	-	-	-	-	82
S. Dak.	1	2	-	21	1	-	-	-	4	81
Nebr.	11	5	-	20	2	-	1	-	2	104
Kans.	37	20	3	71	3	-	1	1	11	125
S. ATLANTIC	6,151	5,543	129	3,619	10	-	34	13	448	778
Del.	14	11	1	32	-	-	-	-	-	2
Md.	339	412	17	421	1	-	9	-	43	35
D.C.	338	446	3	143	-	-	-	-	-	-
Va.	419	474	7	394	2	-	2	3	71	398
W. Va.	21	16	3	109	-	-	3	-	7	37
N.C.	493	418	26	576	-	-	1	7	192	58
S.C.	365	358	27	341	6	-	3	2	96	45
Ga.	1,262	1,415	20	552	-	-	-	-	36	147
Fla.	2,900	1,993	25	1,051	1	-	16	1	3	56
E.S. CENTRAL	1,544	1,388	38	1,613	6	-	14	5	73	513
Ky.	80	77	9	424	-	-	-	-	1	102
Tenn.	411	514	10	518	4	-	2	3	48	288
Ala.	584	400	13	451	-	-	9	2	12	117
Miss.	469	397	6	220	2	-	3	-	12	6
W.S. CENTRAL	5,805	5,090	57	2,111	86	-	27	6	136	833
Ark.	145	111	7	232	54	-	3	1	22	110
La.	1,339	1,195	9	334	3	-	3	2	2	27
Okla.	123	114	-	253	24	-	2	-	68	150
Tex.	4,198	3,670	41	1,292	5	-	19	3	44	546
MOUNTAIN	565	541	25	490	21	-	11	-	10	202
Mont.	3	11	5	32	2	-	-	-	3	67
Idaho	24	17	2	25	1	-	-	-	2	8
Wyo.	15	7	-	2	2	-	-	-	1	20
Colo.	157	164	5	55	4	-	3	-	1	37
N. Mex.	142	94	8	94	2	-	-	-	1	17
Ariz.	119	135	5	208	-	-	5	-	-	38
Utah	15	21	-	25	10	-	2	-	-	12
Nev.	90	92	-	49	-	-	1	-	2	3
PACIFIC	3,268	2,939	79	3,120	7	1	89	1	6	453
Wash.	109	121	14	200	1	-	3	-	-	4
Oreg.	79	68	1	120	-	1	4	-	1	2
Calif.	2,992	2,693	60	2,532	5	-	79	1	5	370
Alaska	9	10	-	65	1	-	1	-	-	77
Hawaii	79	47	4	203	-	-	2	-	-	-
Guam	1	-	U	34	-	U	-	U	-	-
P.R.	465	468	-	274	-	-	2	-	-	38
V.I.	20	13	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	65	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending September 11, 1982 (36th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	608	396	138	27	22	25	35
Boston, Mass	173	96	43	13	7	14	18
Bridgeport, Conn	39	25	11	-	2	1	3
Cambridge, Mass	17	13	3	-	1	-	3
Fall River, Mass	38	26	9	1	1	1	-
Hartford, Conn	50	30	14	3	2	1	1
Lowell, Mass	20	14	4	-	2	-	-
Lynn, Mass	22	13	7	2	-	-	-
New Bedford, Mass	18	12	5	-	1	-	1
New Haven, Conn	44	23	14	2	2	3	1
Providence, R.I. §	52	50	-	1	-	1	4
Somerville, Mass	9	7	2	-	-	-	-
Springfield, Mass	45	34	7	1	3	-	1
Waterbury, Conn	23	16	6	1	-	-	1
Worcester, Mass	58	37	13	3	1	4	2
MID. ATLANTIC	2,366	1,522	544	167	68	64	77
Albany, N.Y.	62	42	14	-	2	4	1
Allentown, Pa.	20	16	4	-	-	-	-
Buffalo, N.Y.	12[illegible]	84	22	4	4	7	9
Camden, N.J.	43	23	18	1	-	1	-
Elizabeth, N.J.	15	11	4	-	-	-	1
Erie, Pa.†	31	23	8	-	-	-	-
Jersey City, N.J.	40	24	13	3	-	-	-
N.Y. City, N.Y.	1,311	848	277	114	41	31	48
Newark, N.J.	52	22	17	7	2	4	1
Paterson, N.J.	23	14	2	3	3	-	3
Philadelphia, Pa.†	232	148	59	14	8	5	6
Pittsburgh, Pa.†	51	28	17	5	1	-	-
Reading, Pa.	22	17	4	1	-	-	-
Rochester, N.Y.	110	70	23	5	5	7	-
Schenectady, N.Y.	18	13	5	-	-	-	-
Scranton, Pa.†	31	22	9	-	-	-	1
Syracuse, N.Y.	104	67	26	7	1	3	-
Trenton, N.J.	31	15	11	3	-	2	-
Utica, N.Y.	21	15	6	-	-	-	5
Yonkers, N.Y.	28	22	5	-	1	-	2
E.N. CENTRAL	1,964	1,203	489	119	63	90	58
Akron, Ohio	68	51	9	3	1	4	-
Canton, Ohio	41	26	10	4	-	1	1
Chicago, Ill.	472	255	145	25	11	36	9
Cincinnati, Ohio	102	64	29	4	2	3	8
Cleveland, Ohio	127	74	40	7	3	3	-
Columbus, Ohio	137	90	19	14	7	7	5
Dayton, Ohio	90	61	18	7	1	3	4
Detroit, Mich.	223	122	61	22	7	11	10
Evansville, Ind.	57	43	13	-	-	1	2
Fort Wayne, Ind.	54	38	10	1	5	-	1
Gary, Ind.	29	13	8	5	3	-	2
Grand Rapids, Mich.	44	29	9	1	-	5	-
Indianapolis, Ind.	109	65	31	6	3	4	1
Madison, Wis.	14	10	1	2	1	-	1
Milwaukee, Wis.	118	85	20	2	7	4	3
Peoria, Ill.	37	21	10	2	2	2	4
Rockford, Ill.	39	30	4	2	2	1	3
South Bend, Ind.	40	23	10	4	1	2	1
Toledo, Ohio	111	70	27	5	6	3	3
Youngstown, Ohio	52	33	15	3	1	-	-
W.N. CENTRAL	639	426	121	38	28	25	17
Des Moines, Iowa§	53	51	-	-	1	-	-
Duluth, Minn.	43	31	6	3	-	3	2
Kansas City, Kans.	22	9	6	2	4	1	-
Kansas City, Mo.	114	71	25	8	4	6	3
Lincoln, Nebr.	23	16	3	1	3	-	5
Minneapolis, Minn.	61	46	10	2	2	1	2
Omaha, Nebr.	68	39	15	7	2	5	1
St. Louis, Mo.	138	88	28	9	9	4	2
St. Paul, Minn.	55	34	12	3	1	5	2
Wichita, Kans.	62	41	16	3	2	-	-
S. ATLANTIC	926	544	224	83	32	43	22
Atlanta, Ga.	114	70	29	11	3	1	5
Baltimore, Md.	140	79	38	12	8	3	2
Charlotte, N.C.	40	17	12	6	3	2	1
Jacksonville, Fla.	97	61	16	5	8	7	2
Miami, Fla.	108	53	31	16	1	7	-
Norfolk, Va.	49	27	17	3	2	-	2
Richmond, Va.	74	41	18	6	1	8	1
Savannah, Ga.	37	27	4	2	-	4	-
St. Petersburg, Fla.	71	56	7	3	1	4	2
Tampa, Fla.	55	34	12	6	1	2	1
Washington, D.C.	93	51	26	10	2	4	5
Wilmington, Del.	48	28	14	3	2	1	1
E.S. CENTRAL	504	313	110	37	22	22	14
Birmingham, Ala.	68	45	18	1	1	3	1
Chattanooga, Tenn.	37	27	3	4	2	1	2
Knoxville, Tenn.	34	19	8	3	2	2	-
Louisville, Ky.	81	50	19	5	3	4	6
Memphis, Tenn.	127	75	20	15	10	7	2
Mobile, Ala.	51	35	11	2	3	-	1
Montgomery, Ala.	24	16	6	1	-	1	-
Nashville, Tenn.	82	46	25	6	1	4	2
W.S. CENTRAL	1,166	682	277	104	66	36	35
Austin, Tex.	48	24	13	6	4	1	2
Baton Rouge, La.	21	14	2	2	1	2	2
Corpus Christi, Tex.	41	28	7	2	2	1	-
Dallas, Tex.	195	98	67	15	10	5	4
El Paso, Tex.	36	23	6	5	2	-	3
Fort Worth, Tex.	75	46	17	8	1	3	7
Houston, Tex.	340	180	89	33	29	9	5
Little Rock, Ark.	55	32	13	2	3	5	1
New Orleans, La.	128	81	25	9	7	6	-
San Antonio, Tex.	143	98	21	16	6	2	6
Shreveport, La.	26	19	5	2	-	-	1
Tulsa, Okla.	58	39	12	4	1	2	4
MOUNTAIN	533	318	125	43	31	16	19
Albuquerque, N.Mex.	84	44	23	11	5	1	1
Colo. Springs, Colo.	18	13	5	-	-	-	2
Denver, Colo.	97	65	18	6	4	4	5
Las Vegas, Nev.	94	50	26	11	5	2	3
Ogden, Utah	10	6	3	1	-	-	-
Phoenix, Ariz.	116	68	27	5	11	5	-
Pueblo, Colo.	15	9	1	2	3	-	2
Salt Lake City, Utah	32	17	6	4	1	4	-
Tucson, Ariz.	67	46	16	3	2	-	6
PACIFIC	1,385	903	284	102	50	45	60
Berkeley, Calif.	23	19	3	1	-	-	-
Fresno, Calif.	60	43	6	6	2	3	2
Glendale, Calif.	16	11	3	1	1	-	2
Honolulu, Hawaii	64	44	11	4	3	2	6
Long Beach, Calif.	100	61	23	6	6	4	4
Los Angeles, Calif.	368	246	72	31	10	8	14
Oakland, Calif.	48	29	14	4	-	1	4
Pasadena, Calif. §	30	28	-	1	-	1	1
Portland, Oreg.	100	66	18	4	6	6	4
Sacramento, Calif.	58	35	14	8	1	-	2
San Diego, Calif.	132	86	32	8	4	2	7
San Francisco, Calif.	104	69	22	7	3	3	3
San Jose, Calif.	90	56	24	5	5	-	5
Seattle, Wash.	119	70	26	10	6	7	2
Spokane, Wash.	39	20	10	5	1	3	4
Tacoma, Wash.	34	20	6	1	2	5	-
TOTAL	10,091††	6,307	2,312	720	382	366	337

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Neisseria gonorrhoeae — Continued

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Epidemiologic Notes and Reports

Vaccinia Necrosum after Smallpox Vaccination — Michigan

On April 1, 1982, a 61-year-old female with a 2-year history of severe recurrent genital herpes received a smallpox vaccination in an attempt to treat the disease. A persistent ulcer developed at the vaccination site on her left arm. When, on May 5, she was hospitalized for the first time for treatment of the vaccinia necrosum, the ulcer measured 5x5 cm and yielded vaccinia virus on culture. She had multiple erythematous perineal ulcers from which herpes virus was recovered. Initial work-up revealed a hemoglobin of 10.8, white blood cell count of 3,200/mm^3, and normal immunoelectrophoresis, but specific immunoglobulins were low (IgA = 10 mg/100 ml, IgG = 310, and IgM = 15). Intermediate PPD, histoplasmin, candida, and mumps skin tests were negative. During hospitalization from May 5 to May 15, she received vaccinia immune globulin (VIG), oral thiosemicarbazone, and intravenous acyclovir. The perineal ulcers cleared almost entirely and became negative on virus culture. However, the left arm ulcer was unchanged and continued to yield vaccinia virus.

During follow-up as an outpatient, her arm ulcer gradually enlarged. When the patient was rehospitalized from June 1 to June 14, the arm ulcer measured approximately 8x7 cm, but she had no evidence of active genital herpes. During the second hospitalization, she received VIG, oral thiosemicarbazone, and interferon—5 million units intramuscularly daily for 10 days. When she was discharged on June 14, her arm ulcer was approximately the same size as on admission, and a small lesion, believed to be a minor scratch or mosquito bite, was present on the left thigh. The patient was treated as an outpatient with intravenous interferon, 8 million units, three times a week. The left arm ulcer remained approximately the same size but showed some signs of epithelialization. The lesion on her left thigh, however, increased in size to an ulcer approximately 2.5 cm in diameter. Both the left arm and the left thigh ulcers repeatedly yielded vaccinia virus. The patient was hospitalized for the third time from July 15 to July 20 for surgical removal of the ulcer on her left thigh and retreatment with interferon, thiosemicarbazone, and VIG. In addition, she received four doses of transfer factor at the University of Michigan—Ann Arbor. On last examination, the site of the leg lesion was still positive for vaccinia virus and the arm lesion has shown no signs of improvement. Other modes of therapy being considered include surgical removal of the left-arm ulcer and treatment with thymosin.

Vaccinia Necrosum — Continued

Reported by M Gurwith, MD, Div of Infectious Diseases, Michigan State University, Dept of Medicine, East Lansing, NS Hayner, State Epidemiologist, Michigan State Health Dept; International Health Program Office, CDC.

Editorial Note: To date, the patient has required three hospitalizations for treatment of smallpox vaccination complications for which none of the usual treatments has been effective. The severe course of her herpes and vaccinia infections suggest underlying immunosuppression or deficiency, but no specific immunologic defect has been identified.

This case of vaccinia necrosum demonstrates the risk of using smallpox vaccination, a treatment with no proven effectiveness, for herpes disease (*1*). The Food and Drug Administration recently published a warning to all physicians on the inappropriate use of smallpox vaccination for herpes infection (*2*).

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Notice to Readers

Announcement of *Legionella* Symposium

The second International Symposium on *Legionella*, sponsored by the Emory University School of Medicine, United States Environmental Protection Agency, and Centers for Disease Control, will be held June 19-23, 1983, in Atlanta Georgia. Papers on all aspects of *Legionella* are being sought. For information and placement on the mailing list, contact:

Dr. James C. Feeley
Chairman, Program Advisory Committee
Bldg. 1, Rm. B-353
Centers for Disease Control
Atlanta, Georgia 30333

Erratum, Vol. 31, No. 32

p.435. In the article, "Cercarial Dermatitis among Bathers in California; Katayama Syndrome among Travelers to Ethiopia," schistosomulae, as printed in the editorial note on page 437, was misspelled; the correct spelling for the plural of schistosomulum is schistosomula.

Erratum, Vol. 31, No. 33

p.454. In the article, "Bacteriologic Conversion of Sputum among Tuberculosis Patients," the percentage under the heading "Sputum Converted in 3 months" in Table 1 on page 459 should read "55.3."

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September 24, 1982 / Vol. 31 / No. 37

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

505 Multi-State Outbreak of Yersiniosis
507 Update on Acquired Immune Deficiency Syndrome (AIDS) – United States
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Epidemiologic Notes and Reports

Multi-State Outbreak of Yersiniosis

Between June 11 and July 29, 1982, a large interstate outbreak of enteritis caused by *Yersinia enterocolitica* occurred. State health departments became aware of a potential problem when hospitals reported increased numbers of *Y. enterocolitica* isolates. Epidemiologic investigation implicated milk pasteurized at a plant in Memphis, Tennessee, as the vehicle of infection.

One hundred seventy-two culture-positive *Y. enterocolitica* infections were identified: 67 in the Little Rock, Arkansas, area; 80 in Memphis, Tennessee, and its northern Mississippi suburbs; and 25 in the Greenwood, Mississippi, area. One hundred forty-eight (86%) patients had enteric infections with diarrhea and/or abdominal pain, usually accompanied by fever; 24 patients had extra-intestinal infections of throat, blood, urinary tract, central nervous system, and wounds. Forty-one percent of cases occurred among children less than 5 years of age. Most patients required hospitalization, and 17 underwent appendectomies. The epidemic strain is agglutinated most strongly by antisera to *Y. enterocolitica* O groups 13 and 18.

Separate case-control studies in each city showed that drinking milk pasteurized by a milk plant in Memphis was associated with illness (in Little Rock, $p = 0.03$; in Memphis, $p = 0.01$; in Greenwood, $p = 0.004$). Overall, 71% of cases and 39% of controls recalled drinking milk from the plant in the 2 weeks before onset of symptoms.

In an effort to estimate the size of the outbreak, a survey was made by telephone of 100 randomly chosen households in Greenwood. Heads of households were queried concerning illness and milk drinking history within the last two months. Eleven cases of yersiniosis-like illness, defined as either 1) fever $\geqslant$ 101 F (38.3 C) and diarrhea or 2) fever $\geqslant$ 101 F and abdominal pain at any time during the previous 6 weeks, were identified among the 260 members of these households. All patients resided in households that used milk from the implicated plant, and 10 of the 11 (91%) recalled drinking its milk within the previous 2 months. Illness occurred in 6 of 50 (12%) households that used milk from the implicated plant and in none of 50 that did not use its milk ($p=0.02$, Fisher's exact test). Of those individuals who drank milk from that plant, 8.7% had a yersiniosis-like illness. Based on a census of 20,115 and the number of the Memphis plant milk drinkers in Greenwood, it was estimated that 857 cases (95% confidence limits 363.5-1,351.7) may have occurred in Greenwood where only 3.9% of the plant's milk is sold. The total number of cases in all three states, therefore, would appear to be higher than the 172 cases reported.

The outbreak appeared to end spontaneously. Milk from suspected lots was not available for culture, and *Y. enterocolitica* was not isolated from subsequent lots. A Food and Drug Administration laboratory isolated *Y. enterocolitica* of the same serotype found in the outbreak from a

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Yersiniosis – Continued

milk crate on a hog farm where outdated milk from the implicated plant is fed to hogs. Inspection of the plant identified neither a breach in pasteurizing technique nor an obvious source of contamination. Surveillance for new cases and surveillance of milk for *Yersinia* have continued.

Reported by JP Lofgren, MD, State Epidemiologist, Arkansas State Dept of Health; C Konigsberg, MD, R Rendtorff, MD, V Zee, MPH, Memphis-Shelby County Health Dept, RH Hutcheson, Jr, MD, State Epidemiologist, Tennessee State Dept of Public Health; A Rausa, MD, D Brower, District Health Office, Greenwood, WE Riecken, Jr, MD, State Epidemiologist, Mississippi Dept of Health; Food and Drug Administration; Field Services Div, Epidemiology Program Office, Family Planning Div, Center for Health Promotion and Education, Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: In this investigation pasteurized milk was epidemiologically implicated as the vehicle of transmission of *Y. enterocolitica*. The temporal and geographic clustering of cases and the negative cultures of subsequent lots of milk are consistent with contamination of a single lot. The mechanism of contamination is unknown.

Y. enterocolitica may be found in raw milk (*1,2*); contaminated raw milk was responsible for an outbreak of yersiniosis among children in Montreal (*3*). The organism has also been found in pasteurized milk (*1,4*) although not associated with illness. *Y. enterocolitica* generally does not survive standard pasteurization (*5*); however, if present in large enough numbers, viable *Yersinia* may persist after pasteurization (*4-6*). Once present in a pasteurized product, the organism grows well at refrigeration temperature (*7*). Therefore, pasteurization and proper handling of pasteurized milk may not ensure against enteric disease due to *Y. enterocolitica*.

Only two other well documented food-borne outbreaks of *Y. enterocolitica* enteritis have been reported in the United States: one in New York state in 1976 caused by contaminated chocolate milk (*8*) and one in Washington state in 1982 caused by tofu (*9*). Food-borne transmission of yersiniosis has also been suspected in other outbreaks (*10-12*). This is the largest outbreak of yersiniosis ever reported in the United States.

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Current Trends

Update on Acquired Immune Deficiency Syndrome (AIDS) — United States

Between June 1, 1981, and September 15, 1982, CDC received reports of 593 cases of acquired immune deficiency syndrome (AIDS).[*] Death occurred in 243 cases (41%).

Analysis of reported AIDS cases shows that 51% had *Pneumocystis carinii* pneumonia (PCP) without Kaposi's sarcoma (KS) (with or without other "opportunistic" infections [OOI] predictive of cellular immunodeficiency); 30% had KS without PCP (with or without OOI); 7% had both PCP and KS (with or without OOI); and 12% had OOI with neither PCP nor KS. The overall mortality rate for cases of PCP without KS (47%) was more than twice that for cases of KS without PCP (21%), while the rate for cases of both PCP and KS (68%) was more than three times as great. The mortality rate for OOI with neither KS nor PCP was 48%.

The incidence of AIDS by date of diagnosis (assuming an almost constant population at risk) has roughly doubled every half-year since the second half of 1979 (Table 1). An average of one to two cases are now diagnosed every day. Although the overall case-mortality rate for the current total of 593 is 41%, the rate exceeds 60% for cases diagnosed over a year ago.

Almost 80% of reported AIDS cases in the United States were concentrated in six metropolitan areas, predominantly on the east and west coasts of the country (Table 2). This distribution was not simply a reflection of population size in those areas; for example, the number of cases per million population reported from June 1, 1981, to September 15, 1982, in New York City and San Francisco was roughly 10 times greater than that of the entire country. The 593 cases were reported among residents of 27 states and the District of Columbia, and CDC has received additional reports of 41 cases from 10 foreign countries.

Approximately 75% of AIDS cases occured among homosexual or bisexual males (Table 3), among whom the reported prevalence of intravenous drug abuse was 12%. Among the 20% of known heterosexual cases (males and females), the prevalence of intravenous drug abuse was about 60%. Haitians residing in the United States constituted 6.1% of all cases (*2*), and 50% of the cases in which both homosexual activity and intravenous drug abuse were denied. Among the 14 AIDS cases involving males under 60 years old who were not homosexuals, intravenous drug abusers, or Haitians, two (14%) had hemophilia A.[†] (*3*)

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[*] Formerly referred to as Kaposi's sarcoma and opportunistic infections in previously healthy persons. (*1*)

[†] A third hemophiliac with pneumocystosis exceeded the 60-year age limit of the AIDS case definition.

TABLE 1. Reported cases and case-mortality rates of AIDS, by half-year of diagnosis,[*] 1979-1982, (as of September 15, 1982) — United States

Half-year of diagnosis		Cases	Deaths	Case-mortality rate (%)
1979	1st half	1	1	100
	2nd half	6	5	83
1980	1st half	17	13	76
	2nd half	26	22	85
1981	1st half	66	46	70
	2nd half	141	79	56
1982	1st half	249	67	27

[*] Excluding 4 cases with unknown dates of diagnosis

Immune Deficiency Syndrome – Continued

Reported AIDS cases may be separated into groups based on these risk factors: homosexual or bisexual males—75%, intravenous drug abusers with no history of male homosexual activity—13%, Haitians with neither a history of homosexuality nor a history of intravenous drug abuse—6%, persons with hemophilia A who were not Haitians, homosexuals, or intravenous drug abusers—0.3%, and persons in none of the other groups—5%.

Reported by the Task Force on Acquired Immune Deficiency Syndrome, CDC

Editorial Note: CDC defines a case of AIDS as a disease, at least moderately predictive of a defect in cell-mediated immunity, occurring in a person with no known cause for diminished resistance to that disease. Such diseases include KS, PCP, and serious OOI.[§] Diagnoses are considered to fit the case definition only if based on sufficiently reliable methods (generally histology or culture). However, this case definition may not include the full spectrum of AIDS manifestations, which may range from absence of symptoms (despite laboratory evidence of immune deficiency) to non-specific symptoms (e.g., fever, weight loss, generalized, persistent

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[§] These infections include pneumonia, meningitis, or encephalitis due to one or more of the following: aspergillosis, candidiasis, cryptococcosis, cytomegalovirus, nocardiosis, strongyloidosis, toxoplasmosis, zygomycosis, or atypical mycobacteriosis (species other than tuberculosis or lepra); esophagitis due to candidiasis, cytomegalovirus, or herpes simplex virus; progressive multifocal leukoencephalopathy; chronic enterocolitis (more than 4 weeks) due to cryptosporidiosis; or unusually extensive mucocutaneous herpes simplex of more than 5 weeks duration.

(Continued on page 513) .

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	37th Week Ending			Cumulative, First 37 Weeks		
	September 18, 1982	September 19, 1981	Median 1977-1981	September 18, 1982	September 19, 1981	Median 1977-1981
Aseptic meningitis	367	438	293	5,245	6,042	4,537
Brucellosis	4	6	6	115	113	126
Encephalitis: Primary (arthropod-borne & unspec.)	68	68	57	837	914	714
Post-infectious	2	1	3	48	69	158
Gonorrhea: Civilian	18,119	21,040	21,040	665,540	709,948	700,978
Military	543	478	495	17,857	20,555	19,590
Hepatitis: Type A	494	442	561	15,561	17,855	20,311
Type B	416	384	353	14,795	14,445	11,740
Non A, Non B	43	N	N	1,533	N	N
Unspecified	189	207	187	6,320	7,756	7,139
Legionellosis	18	N	N	355	N	N
Leprosy	4	1	2	139	176	115
Malaria	35	18	18	739	1,022	530
Measles (rubeola)	10	16	43	1,230	2,597	12,864
Meningococcal infections: Total	41	44	30	2,179	2,621	1,982
Civilian	41	44	30	2,167	2,611	1,984
Military	-	-	-	12	10	14
Mumps	53	40	58	4,181	3,250	11,167
Pertussis	35	32	42	1,009	869	1,098
Rubella (German measles)	21	12	37	1,996	1,761	10,687
Syphilis (Primary & Secondary): Civilian	729	618	498	23,068	21,518	17,203
Military	16	9	9	311	266	226
Tuberculosis	509	558	537	18,077	19,016	19,645
Tularemia	6	7	5	174	188	152
Typhoid fever	10	7	11	281	358	348
Typhus fever, tick-borne (RMSF)	29	14	23	846	1,035	986
Rabies, animal	124	131	97	4,494	5,486	3,006

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism	55	Paralytic	3
Cholera	-	Psittacosis	85
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (Upst. NY 1)	58
Leptospirosis (Ohio 1; Fla. 1; Hawaii 1)	43	Trichinosis (Conn. 1; La. 1)	72
Plague	16	Typhus fever, flea-borne (endemic, murine)	24

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 18, 1982 and September 19, 1981 (37th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	367	115	837	48	665,540	709,948	494	416	43	189	18	139
NEW ENGLAND	9	3	33	5	16,092	17,513	8	13	1	11	-	1
Maine	-	-	-	-	822	908	-	-	-	-	-	
N.H.	-	-	5	-	473	634	1	1	-	-	-	
Vt.	-	-	-	-	305	288	2	-	-	-	-	
Mass.	6	-	13	-	7,275	7,387	4	3	-	10	-	
R.I.	2	-	-	1	1,097	1,023	-	3	-	-	-	
Conn.	1	3	15	4	6,120	7,273	1	6	1	1	-	1
MID. ATLANTIC	58	3	91	10	83,738	84,573	65	73	6	21	6	4
Upstate N.Y.	24	3	31	3	13,966	14,117	11	20	2	2	-	1
N.Y. City	7	-	15	-	34,245	34,742	9	10	-	5	-	1
N.J.	18	-	17	-	15,398	16,311	25	16	4	6	1	1
Pa.	9	-	28	7	20,129	19,403	20	27	-	8	5	1
E.N. CENTRAL	54	1	178	10	89,748	106,394	49	30	1	13	4	3
Ohio	25	1	77	4	26,520	33,250	26	16	-	7	3	
Ind.	10	-	41	3	11,199	9,262	11	2	-	3	-	
Ill.	1	-	9	1	20,271	30,801	2	2	1	-	-	3
Mich.	18	-	46	-	23,082	23,361	10	10	-	3	1	
Wis.	-	-	5	2	8,676	9,720	-	-	-	-	-	
W.N. CENTRAL	18	14	68	4	31,784	33,838	15	9	3	1	-	3
Minn.	1	1	24	1	4,570	5,234	10	-	-	-	-	1
Iowa	9	3	30	1	3,358	3,715	-	1	1	-	-	
Mo.	1	4	6	-	15,106	15,750	5	4	2	1	-	1
N. Dak.	-	-		-	420	424	-	-	-	-	-	
S. Dak.		1	-	1	871	944	-	3	-	-	-	1
Nebr.	-	2	4		1,941	2,550	-	-	-	-	-	
Kans.	7	3	4	1	5,518	5,221	-	1	-	-	-	
S. ATLANTIC	70	23	126	8	173,555	175,209	64	93	13	30	4	9
Del.	-	-	-	-	2,846	2,794	6	12	-	-	-	
Md.	7	-	18	-	22,039	20,175	1	10	2	2	-	3
D.C.	-	-	-	-	10,174	10,036	-	-	-	-	-	
Va.	16	7	28	1	13,910	16,057	11	16	2	12	3	1
W. Va.	3	-	11	-	2,008	2,657	2	-	-	-	-	
N.C.	3	-	14	1	28,011	26,885	2	4	-	4	-	
S.C.	5	2	-		17,222	17,058	12	10	-	3	-	
Ga.	3	3	8	-	31,389	36,464	7	17	1	-	-	1
Fla.	33	11	47	6	45,956	43,083	23	24	8	9	1	4
E.S. CENTRAL	12	11	44	2	58,466	59,132	23	24	2	4	-	
Ky.	3	-	-		7,872	7,350	14	7	-	2	-	
Tenn.	5	6	20	-	22,957	22,447	8	10	1	1	-	
Ala.	1	4	15	2	17,345	17,965		4	1	1	-	
Miss.	3	1	9	-	10,292	11,370	1	3	-	-	-	
W.S. CENTRAL	74	33	139	1	93,960	94,184	120	48	2	52	1	24
Ark.	2	7	10	-	7,696	7,026	-	1	-	10	-	
La.	5	8	15	-	17,393	16,350	16	9	2	1	-	
Okla.	48	5	30	-	10,261	10,182	39	16	-	3	1	
Tex.	19	13	84	1	58,610	60,626	65	22	-	38	-	24
MOUNTAIN	21	-	28	3	22,844	27,575	66	20	3	14	1	2
Mont.	-	-	-	-	942	1,003	-	-	-	-	-	
Idaho	2	-	-	-	1,111	1,259	3	-	-	-	-	1
Wyo.	-	-	-	-	680	680	2	1	-	2	-	
Colo.	12	-	14	1	6,144	7,442	8	4	2	4	-	
N. Mex.		-	-	-	3,011	2,902	12	-	-	1	-	
Ariz.		-	6	-	5,960	8,258	32	6	1	-	-	
Utah	6	-	4	2	1,105	1,347	5	3	-	6	1	1
Nev.	1	-	4	-	3,891	4,684	4	6	-	1	-	
PACIFIC	51	27	130	5	95,353	111,530	84	106	12	43	2	93
Wash.	3	1	11	-	7,997	9,281	5	4	-	2	2	6
Oreg.	4	-	3	-	5,524	6,605	7	2	-	-	-	1
Calif.	44	25	110	5	77,586	90,633	71	97	12	41	-	64
Alaska	-	1	4	-	2,397	2,795	1	-	-	-	-	1
Hawaii	-	-	2	-	1,849	2,216	-	3	-	-	-	21
Guam	U	-	-	-	81	87	U	U	U	U	U	
P.R.	3	-	1	-	1,988	2,375	9	10	-	1	-	1
V.I.	-	-	-	-	162	157	-	1	-	-	-	
Pac. Trust Terr.	U	-	-	-	245	322	U	U	U	U	U	12

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 18, 1982 and September 19, 1981 (37th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	35	739	10	1,230	2,597	41	2,179	53	4,181	35	21	1,996	1,761
NEW ENGLAND	2	39	-	11	77	2	116	2	171	1	-	18	113
Maine	-	-	-	-	5	-	9	1	39	-	-	-	33
N.H.	-	1	-	2	6	-	15	1	14	-	-	8	45
Vt.	-	-	-	2	3	1	8	-	7	-	-	-	-
Mass.	1	24	-	4	55	1	29	-	79	1	-	6	23
R.I.	1	3	-	-	-	-	13	-	15	-	-	1	-
Conn.	-	11	-	3	8	-	42	-	17	-	-	3	12
MID. ATLANTIC	12	123	3	161	823	4	393	2	285	8	2	98	207
Upstate N.Y.	2	25	-	110	207	1	139	2	61	5	1	48	99
N.Y. City	6	46	3	43	76	-	72	-	45	1	1	32	51
N.J.	-	26	-	4	56	2	81	-	38	2	-	17	46
Pa.	4	26	-	4	484	1	101	-	121	-	-	1	11
E.N. CENTRAL	1	51	-	74	80	5	255	8	2,167	8	1	165	367
Ohio	-	11	-	1	16	1	91	6	1,562	3	1	1	3
Ind.	-	2	-	2	8	2	26	-	37	-	-	27	127
Ill.	-	11	-	23	23	1	69	-	174	1	-	58	90
Mich.	1	25	-	48	30	1	57	-	296	2	-	48	34
Wis.	-	2	-	-	3	-	12	2	98	2	-	31	113
W.N. CENTRAL	-	19	-	49	10	2	95	19	564	3	-	56	76
Minn.	-	2	-	-	3	2	24	19	437	1	-	5	7
Iowa	-	6	-	-	1	-	7	-	31	1	-	-	4
Mo.	-	5	-	2	1	-	26	-	16	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	12	-	-	-	-	-	1
Kans.	-	2	-	44	1	-	16	-	79	1	-	12	62
S. ATLANTIC	1	107	-	41	364	11	452	4	243	12	-	75	134
Del.	-	4	-	-	-	-	-	-	10	1	-	1	1
Md.	-	16	-	3	5	1	28	2	27	3	-	34	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	-	32	-	14	7	2	55	-	33	3	-	13	6
W. Va.	-	7	-	3	9	1	10	1	88	2	-	1	22
N.C.	-	3	-	-	3	-	84	-	12	1	-	1	5
S.C.	-	4	-	-	2	1	52	-	15	-	-	1	8
Ga.	-	14	-	-	111	1	92	1	13	1	-	10	36
Fla.	1	23	-	20	226	5	129	-	45	1	-	14	55
E.S. CENTRAL	-	7	-	8	5	2	141	-	47	1	-	44	35
Ky.	-	4	-	1	1	-	24	-	15	-	-	26	21
Tenn.	-	-	-	6	2	2	61	-	18	-	-	2	13
Ala.	-	-	-	-	2	-	46	-	8	-	-	-	1
Miss.	-	3	-	1	-	-	10	-	8	1	-	16	-
W.S. CENTRAL	1	53	3	45	846	2	265	4	173	1	1	95	148
Ark.	-	4	-	-	1	1	13	-	6	-	-	1	3
La.	-	4	-	2	4	-	52	-	6	-	-	1	9
Okla.	-	8	3	29	5	-	25	-	-	-	-	3	-
Tex.	1	37	-	14	836	1	175	4	161	1	1	90	136
MOUNTAIN	2	23	-	11	34	1	93	2	86	-	-	76	87
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	1	2	-	-	1	1	7	-	4	-	-	6	4
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	10
Colo.	-	9	-	6	10	-	41	-	15	-	-	6	30
N. Mex.	-	3	-	-	8	-	14	-	-	-	-	6	5
Ariz.	-	5	-	5	5	-	18	2	37	-	-	14	20
Utah	1	3	-	-	-	-	8	-	19	-	-	21	5
Nev.	-	-	-	-	10	-	2	-	6	-	-	11	10
PACIFIC	16	317	4	830	358	12	363	12	465	1	17	1,369	594
Wash.	1	17	-	39	3	3	40	3	64	-	1	38	89
Oreg.	-	11	-	15	4	-	68	-	-	-	-	6	53
Calif.	14	286	3	770	344	9	240	8	385	1	16	1,312	436
Alaska	1	1	-	1	-	-	11	1	7	-	-	5	1
Hawaii	-	2	1	5	7	-	4	-	9	-	-	8	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	1	103	270	-	8	4	58	-	3	11	3
V.I.	-	-	-	-	24	-	-	-	3	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	4	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 18, 1982 and September 19, 1981 (37th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	23,068	21,518	509	18,077	174	10	281	29	846	4,494
NEW ENGLAND	397	418	27	500	5	-	16	-	8	36
Maine	4	4	2	42	-	-	-	-	-	26
N.H.	1	12	2	17	-	-	-	-	1	-
Vt.	2	13	1	13	-	-	2	-	-	1
Mass.	263	275	15	320	5	-	12	-	4	5
R.I.	19	24	3	23	-	-	-	-	2	-
Conn.	108	90	4	85	-	-	2	-	1	4
MID. ATLANTIC	3,161	3,141	105	3,070	7	6	51	2	33	148
Upstate N.Y.	309	294	20	535	7	1	7	1	11	72
N.Y. City	1,900	1,861	33	1,165	-	2	26	-	1	-
N.J.	434	438	25	600	-	-	11	1	13	14
Pa.	518	548	27	770	-	3	7	-	8	62
E.N. CENTRAL	1,186	1,573	46	2,715	1	-	22	-	77	466
Ohio	222	221	3	459	-	-	11	-	72	67
Ind.	143	198	4	347	-	-	-	-	-	69
Ill.	538	822	28	1,128	-	-	3	-	5	244
Mich.	215	262	5	631	-	-	7	-	-	4
Wis.	68	70	6	150	1	-	1	-	-	82
W.N. CENTRAL	398	447	3	514	26	-	10	-	31	970
Minn.	85	150	-	87	-	-	5	-	-	165
Iowa	22	16	-	54	2	-	1	-	4	311
Mo.	235	245	2	251	18	-	2	-	10	94
N. Dak.	7	7	-	9	-	-	-	-	-	82
S. Dak.	1	2	1	22	1	-	-	-	4	81
Nebr.	11	6	-	20	2	-	1	-	2	106
Kans.	37	21	-	71	3	-	1	-	11	131
S. ATLANTIC	6,306	5,694	124	3,741	10	1	35	17	462	811
Del.	16	11	3	35	-	-	-	-	-	2
Md.	348	433	14	433	1	-	9	1	44	35
D.C.	342	459	1	144	-	-	-	-	-	-
Va.	431	495	15	409	2	1	3	5	73	421
W. Va.	21	17	7	116	-	-	3	-	7	37
N.C.	503	429	30	606	-	-	1	6	198	58
S.C.	373	379	20	361	6	-	3	1	97	47
Ga.	1,317	1,446	15	567	-	-	-	4	40	154
Fla.	2,955	2,025	19	1,070	1	-	16	-	3	57
E.S. CENTRAL	1,618	1,425	37	1,649	6	2	16	3	76	526
Ky.	86	78	15	439	-	1	1	-	1	104
Tenn.	444	521	10	528	4	1	3	-	48	292
Ala.	603	420	9	459	-	-	9	-	12	123
Miss.	485	406	3	223	2	-	3	3	15	7
W.S. CENTRAL	6,090	5,228	79	2,190	90	-	27	7	143	855
Ark.	151	112	13	245	55	-	3	3	25	114
La.	1,399	1,210	3	337	3	-	3	-	2	29
Okla.	128	115	-	253	26	-	2	-	68	154
Tex.	4,412	3,791	63	1,355	6	-	19	4	48	558
MOUNTAIN	573	548	20	510	22	-	11	-	10	216
Mont.	3	11	-	32	2	-	-	-	3	71
Idaho	24	17	-	25	1	-	-	-	2	8
Wyo.	15	7	-	2	2	-	-	-	1	21
Colo.	161	169	3	58	4	-	3	-	1	41
N. Mex.	142	96	-	94	2	-	-	-	1	18
Ariz.	121	135	8	215	-	-	5	-	-	40
Utah	16	21	9	34	11	-	2	-	-	14
Nev.	91	92	-	49	-	-	1	-	2	3
PACIFIC	3,339	3,044	68	3,188	7	1	93	-	6	466
Wash.	109	125	2	202	1	-	6	-	-	5
Oreg.	82	70	3	123	-	-	4	-	1	2
Calif.	3,059	2,789	56	2,588	5	-	79	-	5	381
Alaska	9	13	-	65	1	-	1	-	-	78
Hawaii	80	50	7	210	-	1	3	-	-	-
Guam	1	-	U	34	-	U	-	U	-	
P.R.	500	483	2	291	-	-	2	-	-	41
V.I.	21	13	-	1	-	-	-	-	-	
Pac. Trust Terr.	-	-	U	85	-	U	-	U	-	

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending September 18, 1982 (37th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	640	423	150	30	16	21	33
Boston, Mass	166	95	49	8	7	7	14
Bridgeport, Conn	40	26	8	3	-	3	4
Cambridge, Mass	35	27	6	1	1	-	1
Fall River, Mass	30	21	7	-	-	2	-
Hartford, Conn	44	36	5	1	1	1	2
Lowell, Mass	27	21	6	-	-	-	1
Lynn, Mass	15	11	1	1	1	1	-
New Bedford, Mass	30	18	8	2	1	1	1
New Haven, Conn	51	33	10	4	2	2	1
Providence, R I	66	37	22	4	1	2	1
Somerville, Mass	7	7	-	-	-	-	-
Springfield, Mass	42	25	10	4	1	2	6
Waterbury, Conn	31	23	8	-	-	-	2
Worcester, Mass	59	43	10	2	1	-	-
MID ATLANTIC	2,599	1,663	588	196	69	63	91
Albany, N Y	58	38	13	3	1	3	1
Allentown, Pa	20	15	5	-	-	-	-
Buffalo, N Y	117	75	23	9	7	3	5
Camden, N J	38	24	8	4	1	1	2
Elizabeth, N J	36	24	9	3	-	-	2
Erie, Pa †	45	31	9	3	1	1	2
Jersey City, N J	52	33	10	3	5	1	-
N Y City, N Y	1,432	920	301	130	37	44	46
Newark, N J	63	35	19	4	2	3	5
Paterson, N J	25	17	5	1	-	2	1
Philadelphia, Pa †	296	187	69	19	5	16	16
Pittsburgh, Pa †	79	48	27	2	1	1	1
Reading, Pa	31	23	7	-	1	-	3
Rochester, N Y	109	70	31	5	1	2	1
Schenectady, N Y	29	22	5	2	-	-	2
Scranton, Pa †	23	15	5	2	-	1	-
Syracuse, N Y	82	46	24	2	6	4	2
Trenton, N J	27	17	7	1	1	1	-
Utica, N Y	23	13	8	2	-	-	-
Yonkers, N Y	14	10	3	1	-	-	2
E N CENTRAL	2,193	1,397	510	135	71	80	68
Akron, Ohio	55	41	12	-	-	2	-
Canton, Ohio	37	27	8	2	-	-	1
Chicago, Ill	495	309	98	45	22	21	7
Cincinnati, Ohio	126	84	30	4	5	3	9
Cleveland, Ohio	151	97	38	6	4	6	-
Columbus, Ohio	139	73	35	10	8	13	1
Dayton, Ohio	92	53	33	3	2	1	3
Detroit, Mich	284	172	64	29	10	9	7
Evansville, Ind	45	31	11	3	-	-	2
Fort Wayne, Ind	49	33	9	2	4	1	5
Gary, Ind	34	20	8	3	2	1	2
Grand Rapids, Mich	60	38	12	4	4	2	7
Indianapolis, Ind	174	109	50	5	-	10	2
Madison, Wis	25	18	5	-	1	1	1
Milwaukee, Wis	123	90	26	3	2	2	6
Peoria, Ill	37	27	5	3	1	1	4
Rockford, Ill	41	26	8	2	3	2	2
South Bend, Ind	45	27	11	5	1	1	5
Toledo, Ohio	117	74	33	6	-	4	3
Youngstown, Ohio	64	48	14	-	2	-	1
W N CENTRAL	757	524	155	36	17	24	32
Des Moines, Iowa§	53	51	-	-	1	-	-
Duluth, Minn	29	20	8	1	-	-	-
Kansas City, Kans	36	25	6	3	-	2	3
Kansas City, Mo	125	77	27	7	5	9	5
Lincoln, Nebr	33	24	6	1	1	1	4
Minneapolis, Minn	88	63	15	3	3	4	2
Omaha, Nebr	85	52	27	4	1	1	3
St Louis, Mo	182	122	36	14	5	5	8
St Paul, Minn	69	49	16	2	1	1	3
Wichita, Kans	57	41	14	1	-	1	4
S ATLANTIC	1,068	665	241	79	34	49	31
Atlanta, Ga	163	109	32	15	6	1	-
Baltimore, Md	204	125	44	12	10	13	7
Charlotte, N C	68	40	21	2	1	4	2
Jacksonville, Fla	124	72	30	12	3	7	4
Miami, Fla	72	47	15	5	4	1	2
Norfolk, Va	55	32	12	1	2	8	3
Richmond, Va	79	42	20	9	4	4	2
Savannah, Ga	43	20	18	4	1	-	-
St Petersburg, Fla	83	73	6	2	1	1	5
Tampa, Fla	75	48	13	8	2	8	2
Washington, D C	31	15	12	2	-	2	-
Wilmington, Del	67	42	18	7	-	-	4
E S CENTRAL	716	445	156	57	20	38	26
Birmingham, Ala	92	55	24	8	1	4	2
Chattanooga, Tenn	62	46	10	4	1	1	3
Knoxville, Tenn	53	37	12	3	1	-	1
Louisville, Ky	108	60	25	14	3	6	4
Memphis, Tenn	166	99	35	13	6	13	8
Mobile, Ala	62	40	12	7	2	1	3
Montgomery, Ala	56	42	11	1	1	1	1
Nashville, Tenn	117	66	27	7	5	12	4
W S CENTRAL	1,257	727	290	115	76	48	34
Austin, Tex	59	30	18	6	5	-	2
Baton Rouge, La	72	52	11	5	2	2	3
Corpus Christi, Tex	38	26	4	2	1	5	-
Dallas, Tex	181	99	45	19	13	5	3
El Paso, Tex	62	26	23	8	3	1	3
Fort Worth, Tex	114	71	29	9	5	-	3
Houston, Tex	252	106	73	33	28	12	-
Little Rock, Ark	68	41	13	7	4	3	3
New Orleans, La	91	58	20	7	3	3	-
San Antonio, Tex	155	100	33	8	4	10	9
Shreveport, La	61	46	9	1	3	2	2
Tulsa, Okla	104	72	12	10	5	5	6
MOUNTAIN	631	377	156	50	23	25	18
Albuquerque, N Mex	62	38	18	2	2	2	3
Colo Springs, Colo	32	21	7	2	-	2	2
Denver, Colo	132	88	26	11	5	2	4
Las Vegas, Nev	81	38	24	12	4	3	-
Ogden, Utah	14	8	2	2	-	2	-
Phoenix, Ariz	134	81	35	6	7	5	1
Pueblo, Colo	23	14	5	2	1	1	1
Salt Lake City, Utah	52	27	13	5	2	5	2
Tucson, Ariz	101	62	26	8	2	3	5
PACIFIC	1,787	1,148	373	128	85	51	81
Berkeley, Calif	27	18	4	3	1	1	-
Fresno, Calif	60	46	7	2	5	-	4
Glendale, Calif	27	21	5	-	1	-	-
Honolulu, Hawaii	63	32	18	5	2	6	4
Long Beach, Calif	80	52	17	8	2	1	5
Los Angeles, Calif	480	293	106	40	29	11	13
Oakland, Calif	65	42	17	2	2	2	7
Pasadena, Calif	34	19	8	-	1	6	-
Portland, Oreg	148	95	34	8	8	3	3
Sacramento, Calif	78	49	13	6	5	5	6
San Diego, Calif	144	96	32	7	6	2	13
San Francisco, Calif	173	104	42	18	5	4	4
San Jose, Calif	177	119	33	14	7	4	14
Seattle, Wash	147	101	25	11	7	3	3
Spokane, Wash	49	37	5	2	3	2	4
Tacoma, Wash	35	24	7	2	1	1	1
TOTAL	11,648††	7,369	2,619	826	411	419	414

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Immune Deficiency Syndrome — Continued

lymphadenopathy) (*4*) to specific diseases that are insufficiently predictive of cellular immunodeficiency to be included in incidence monitoring (e.g., tuberculosis, oral candidiasis, herpes zoster) to malignant neoplasms that cause, as well as result from, immunodeficiency[¶] (*5*). Conversely, some patients who are considered AIDS cases on the basis of diseases only moderately predictive of cellular immunodeficiency may not actually be immunodeficient and may not be part of the current epidemic. Absence of a reliable, inexpensive, widely available test for AIDS, however, may make the working case definition the best currently available for incidence monitoring.

Two points in this update deserve emphasis. First, the eventual case-mortality rate of AIDS, a few years after diagnosis, may be far greater than the 41% overall case-mortality rate noted

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[¶] CDC encourages reports of any cancer among persons with AIDS and of selected rare lymphomas (Burkitt's or diffuse, undifferentiated non-Hodgkins lymphoma) among persons with a risk factor for AIDS. This differs from the request for reports of AIDS cases regardless of the absence of risk factors.

TABLE 2. AIDS cases per million population,* by standard metropolitan statistical area (SMSA) of residence, reported from June 1, 1981 to September 15, 1982 — United States

SMSA of residence	Cases	Percentage of total	Cases per million population
New York, N.Y.	288	48.6	31.6
San Francisco, Calif.	78	13.2	24.0
Miami, Fla.	31	5.2	19.1
Newark, N.J.	15	2.5	7.6
Houston, Texas	15	2.5	5.2
Los Angeles, Calif.	37	6.2	4.9
Elsewhere (irrespective of SMSA)	129	21.8	0.6
Total	593	100.0	2.6

*From the 1980 Census

TABLE 3. Cases of AIDS, by sexual orientation and intravenous drug abuse, reported from June 1, 1981, to September 15, 1982 — United States

Sex	Sexual orientation	Cases	Percentage distribution by sexual orientation	Intravenous drug abuse* Yes	No	Unknown	Percentage using IV drugs†
Male	Homosexual or bisexual	445	75.0	42	300	103	12.3
	Heterosexual	84	14.2	49	33	2	59.8
	Unknown	30	5.1	11	11	8	50.0
Female	Heterosexual	34	5.7	20	12	2	62.5
Total		593	100.0	122	356	115	25.5

*Regardless of when the last such activity occurred.

†Excluding cases with unknown history of IV drug abuse.

Immune Deficiency Syndrome – Continued

above. Second, the reported incidence of AIDS has continued to increase rapidly. Only a small percentage of cases have none of the identified risk factors (male homosexuality, intravenous drug abuse, Haitian origin, and perhaps hemophilia A). To avoid a reporting bias, physicians should report cases regardless of the absence of these factors.

Physicians aware of patients fitting the case definition for AIDS are requested to report such cases to CDC through their local or state health departments.

References

1. CDC. Update on Kaposi's sarcoma and opportunistic infections in previously healthy persons - United States. MMWR 1982;31:294, 300-1.
2. CDC. Opportunistic infections and Kaposi's sarcoma among Haitians in the United States. MMWR 1982;31:353-4, 360-1.
3. CDC. *Pneumocystis carinii* pneumonia among persons with hemophilia A. MMWR 1982;31:365-7.
4. CDC. Persistent, generalized lymphadenopathy among homosexual males. MMWR 1982;31:249-51.
5. CDC. Diffuse, undifferentiated non-Hodgkins lymphoma among homosexual males—United States. MMWR 1982;31:277-9.

Clarification, Vol. 31, No. 35

p. 477. In the article, "Rubella Vaccination During Pregnancy—United States, 1971-1981," the second-to-last paragraph on page 480 should read, "Nevertheless, rubella vaccine should not be administered to pregnant females. Reasonable precautions before administering rubella vaccine to women of child-bearing age include asking whether they are pregnant and excluding those who say they are. Those who say they are not pregnant are advised not to become pregnant for 3 months after vaccination."

Erratum, Vol. 31, No. 36

p. 494 In the article "Influenza—Worldwide," incorrect dates were given in the editorial note on page 495 for the first circulation of H1N1 viruses in the United States (early 1978, not early 1977); and for the last major epidemics of influenza A(H3N2) virus in the United States (1980-1981, not 1979-1980).

The Morbidity and Mortality Weekly Report, circulation 111,104, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

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CENTERS FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

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Current Trends

Elimination of Indigenous Measles — United States

An effort is underway to eliminate indigenous measles* from the United States; a target date of October 1, 1982 has been set (*1*). This article summarizes the success of that effort and the current measles situation in the United States.

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The measles elimination strategy has three major aspects: achievement and maintenance of high immunization levels, development of strong and effective surveillance systems, and aggressive response to the occurrence of disease. Implementation of this strategy has involved numerous private agencies, professional organizations, teachers, parents, and students, as well as governmental agencies at all levels.

All states now have laws requiring measles immunization as a condition of first entry to school; in 40 states and the District of Columbia, these laws extend to all grade levels (kindergarten through 12th grade). In the fall of 1981, the national measles immunization level was 97% for children entering kindergarten or first grade for the first time. Every state has strengthened its surveillance systems; in 43 states, active surveillance systems in which health departments regularly contact health care providers likely to see suspected cases of measles have been instituted. Suspected cases of measles are usually investigated within 24 hours of notification. Routine aggressive responses to suspected cases and outbreaks include rapid identification of susceptibles, provision of vaccination services, and the exclusion of susceptibles from school.

To reduce the importation of measles into this country, all offices issuing United States visas abroad currently provide information on the importance of assuring measles immunization. Although no vaccination requirement currently exists for entry into the United States, visa applicants are advised that children cannot enter school in the United States without proof of immunization. The U.S. Armed Services have instituted a policy of routinely vaccinating susceptible recruits against measles.

These program elements are largely responsible for the marked progress that has been made to date (Table 1, Figure 1). Impressive declines have been seen in the reported occurrence of measles. The number of measles cases reported in the first 37 weeks of 1982 is < 3% of the number reported in the same period of 1977 and < 0.3% of the number reported during the same period of 1962 (the year before measles vaccine was introduced). For the past 66 weeks, < 100 cases per week have been reported.† By contrast, in no year before 1977 had < 100 cases per week been reported for as many as 10 weeks.

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*A measles case that occurrs within the United States and cannot be related to an imported case or a measles case that occurrs more than two generations after an imported case to which it is epidemiologically linked.

†provisional information

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Measles – Continued

Just as the overall number of measles cases has declined dramatically, so has the geographic extent of measles in the United States (Table 2). Only 10% of the nation's counties reported measles at any time during 1981, and provisional data indicate that only 5.3% of counties have reported measles thus far in 1982, suggesting that indigenous transmission has been eliminated from most of the United States.

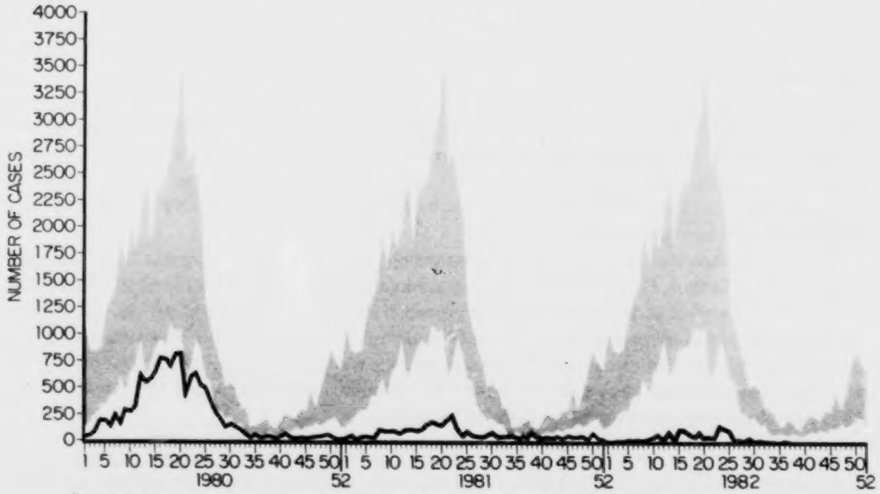
Increasing effort is being made to identify the source of every reported measles case and to confirm each case serologically or epidemiologically by linkage to other measles cases. In the 12-week period from July 3 through September 24, 1982, a source was identified for 57% of the measles cases provisionally reported, and 23% of the cases have been confirmed serologically.

In 1982, imported measles cases have been reported at a rate of approximately 2.5 cases per week; most have resulted in little or no secondary spread. During the past 12 weeks, there

TABLE 1. Number of measles cases reported, weeks 1-37, 1977-1982 — United States

Year (Weeks 1-37)	No. of cases	Change from previous year (%)
1977	53,023	
1978	22,904	-56.8
1979	12,135	-47.0
1980	12,843	+5.8
1981	2,668	-79.2
1982	1,230	-53.9

FIGURE 1. Reported measles cases,* 1980-1982 — United States



* ▒ Shaded area represents maximum and minimum weekly values during 5 year period, 1975–1979

Source MMWR weekly reports

CDC, CPS, IM

Measles – Continued

were 33 imported cases—only 3 of which resulted in any identified secondary spread.[†] In May and June, however, a measles outbreak occurred in Duchess and Ulster Counties, New York, with 89 cases linked to a student who had traveled to the U.S.S.R. with his high school class. Since such importations are likely to continue, they will challenge the maintenance of measles-free status in the United States, necessitating the continued maintenance of high immunization levels and aggressive surveillance systems and responses to the occurrence of suspected cases. Sporadic cases of measles-like illness in which neither an apparent source nor spread can be identified will also continue and must be investigated promptly with efforts made to confirm the diagnosis serologically.

The exact date of the elimination of indigenous measles transmission from the United States will only be known in retrospect. Currently, only 3 chains of transmission are known to exist, one of which involves four states.[†] With the interruption of these last indigenous chains, future measles cases in the United States should be related to measles importations from other countries.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

Reference

1. CDC. Goal to eliminate measles from the United States. MMWR 1978;27:391.

[†] provisional information

TABLE 2. Number of counties reporting measles, 1977-1981 and weeks 1-37, 1982*— United States

Year	No. of counties reporting measles	Percentage of counties§
1977	1,429	45.5
1978	977	31.1
1979	889	28.3
1980	714	22.8
1981	316	10.1
1982 (weeks 1-37)	165	5.3

*Provisional data

§n = 3,144 (1977-79); n = 3,137 (1980-82)

Epidemiologic Notes and Reports

Group A Streptococcal Abscesses after DTP Immunization — Georgia

From July 19 to July 20, 1982, a cluster of severe local reactions with prolonged fever occurred among children immunized with diphtheria-tetanus-pertussis (DTP) vaccine at a private pediatric office in Atlanta, Georgia. Twelve children developed abscesses at the injection site within 2 weeks of vaccination; four of these were hospitalized because of the severity of symptoms or for incision and drainage of their abscesses.

Group A streptococci were cultured from the abscesses of nine of the 12 children. The remaining three had been on antibiotics for at least 5 days before being cultured. In addition, two of the hospitalized children had blood cultures positive for Group A streptococcus. All 11 isolates were of the same type: T-28, M-nontypeable, serum opacity reaction (SOR) positive.

Streptococcal Abscesses – Continued

Eleven children had temperatures > 102 F (38.9 C) lasting 2 or more days; eleven had irritability and four had vomiting. Three had generalized rash, which in one patient clinically resembled scarlatina. Eight children were < 6 months old; two were 6 to 11 months old; and two were > 1 year old. All 12 children had received DTP vaccine from the same lot between 2:00 p.m. July 19 and 12:00 noon July 20. Two additional children who received DTP vaccine during this interval did not develop abscesses; one developed a moderate to severe local reaction that resolved spontaneously without therapy or abscess formation; the other had no fever or local reaction. The attack rate for abscess development during this time was 12 of 14 or 86%. Seventy-seven children, seen at the same office, had received other vaccines during this period or had received DTP vaccine on the 2 days before or the 2 days after this period; their parents were interviewed and reported no abscesses among any of the children.

The pediatric office has five pediatricians and eight nurses. The pediatricians do not give vaccinations. During the period of risk, six of the nurses were known to have given vaccinations. A single 7.5-ml vial of DTP vaccine was probably used for all patients; normal disinfection procedure consisted of wiping vaccine vials with cotton balls saturated with 70% ethanol. The vaccine was left out of the refrigerator between immunizations. At the end of the day, any unused vaccine was returned to the refrigerator and used the next day. On July 30, throat, ear, scalp, vaginal, rectal, and appropriate skin cultures were taken from all nurses and from one child's mother who claimed to be a "strep carrier." Cultures were also taken of unused disposa-

(Continued on page 525)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		38th Week Ending			Cumulative, First 38 Weeks		
		September 25 1982	September 26, 1981	Median 1977-1981	September 25, 1982	September 26, 1981	Median 1977-1981
Aseptic meningitis		364	490	321	5,615	6,500	4,858
Brucellosis		2	5	4	117	118	130
Encephalitis:	Primary (arthropod-borne & unspec.)	50	55	52	888	969	745
	Post-infectious	-	1	4	48	70	162
Gonorrhea:	Civilian	18,530	21,723	23,723	686,105	731,671	722,734
	Military	459	452	567	18,346	21,007	20,066
Hepatitis:	Type A	484	569	607	16,050	18,305	20,974
	Type B	474	428	306	15,296	14,681	12,046
	Non A, Non B	48	N	N	1,581	N	N
	Unspecified	219	235	235	6,539	7,973	7,376
Legionellosis		28	N	N	383	N	N
Leprosy		4	7	2	143	185	117
Malaria		23	32	29	763	1,055	542
Measles (rubeola)		51	65	68	1,277	2,649	12,895
Meningococcal infections:	Total	33	42	28	2,217	2,663	2,010
	Civilian	33	41	28	2,205	2,652	1,992
	Military	-	1	-	12	11	15
Mumps		31	51	100	4,213	3,301	11,267
Pertussis		47	36	49	1,057	905	1,161
Rubella (German measles)		21	20	46	2,018	1,780	10,734
Syphilis (Primary & Secondary):	Civilian	680	718	538	23,836	22,236	17,689
	Military	9	10	10	320	276	231
Tuberculosis		572	540	547	18,584	19,556	20,144
Tularemia		7	10	8	181	198	154
Typhoid fever		9	6	10	290	364	357
Typhus fever, tick-borne (RMSF)		15	31	25	861	1,067	992
Rabies, animal		114	164	121	4,612	5,650	3,727

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Calif. 1)	56	Paralytic	3
Cholera	-	Psittacosis	85
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (N.C. 1, Fla. 1)	61
Leptospirosis (Mo. 1)	43	Trichinosis	72
Plague	15	Typhus fever, flea-borne (endemic, murine) (Tex. 3)	30

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 25, 1982 and September 26, 1981 (38th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	364	117	888	48	686,105	731,671	484	474	48	219	28	143
NEW ENGLAND	11	3	34	5	16,490	17,958	8	22	-	4	-	1
Maine	-	-	-	-	855	938	-	-	-	-	-	-
N.H.	1	-	5	-	483	648	1	2	-	-	-	-
Vt.	-	-	-	-	314	303	1	1	-	-	-	-
Mass.	2	-	13	-	7,400	7,569	3	7	-	4	-	-
R.I.	1	-	-	1	1,113	1,056	-	1	-	-	-	-
Conn.	7	3	16	4	6,325	7,444	3	11	-	-	-	1
MID. ATLANTIC	59	3	97	10	86,296	87,651	71	108	4	26	10	7
Upstate N.Y.	16	3	36	3	14,386	14,764	11	17	3	3	-	1
N.Y. City	13	-	15	-	35,294	36,442	20	40	-	3	-	4
N.J.	15	-	18	-	15,841	16,444	14	28	1	12	2	1
Pa.	15	-	28	7	20,775	20,001	26	23	-	8	8	1
E.N. CENTRAL	81	1	189	10	94,897	109,670	59	54	5	16	10	3
Ohio	31	1	81	4	27,271	34,692	24	20	3	10	3	-
Ind.	9	-	47	3	12,223	9,452	9	4	1	3	6	-
Ill.	-	-	9	1	22,632	31,581	2	4	1	-	-	3
Mich.	41	-	47	-	23,806	23,958	24	26	-	3	1	-
Wis.	-	-	5	2	8,965	9,987	-	-	-	-	-	-
W.N. CENTRAL	25	14	72	4	32,714	34,553	14	20	1	4	-	4
Minn.	3	1	27	1	4,728	5,234	3	6	1	1	-	2
Iowa	4	3	31	1	3,453	3,824	-	4	-	-	-	-
Mo.	11	4	6	-	15,608	16,053	10	7	-	2	-	1
N. Dak.	-	-	-	-	436	437	-	1	-	-	-	-
S. Dak.	-	1	-	1	888	968	-	-	-	-	-	1
Nebr.	1	2	4	-	1,998	2,604	-	-	-	-	-	-
Kans.	6	3	4	1	5,603	5,433	1	2	-	1	-	-
S. ATLANTIC	63	23	134	8	176,873	180,595	55	83	5	18	6	9
Del.	-	-	-	-	2,937	2,905	1	-	-	-	-	-
Md.	6	-	19	-	22,207	21,093	4	18	1	1	-	3
D.C.	-	-	-	-	10,582	10,321	-	5	-	-	-	-
Va.	2	7	28	1	14,302	16,649	1	6	2	1	5	1
W. Va.	8	-	15	-	2,073	2,717	2	4	-	2	-	-
N.C.	22	-	15	1	28,651	27,814	1	9	-	3	-	-
S.C.	-	2	-	-	17,874	17,567	-	1	-	-	-	-
Ga.	2	3	8	-	31,389	37,512	12	15	-	-	-	1
Fla.	23	11	49	6	46,858	44,017	34	25	2	11	1	4
E.S. CENTRAL	9	11	46	2	60,597	60,687	16	19	-	3	-	-
Ky.	1	-	-	-	8,179	7,475	8	5	-	-	-	-
Tenn.	2	6	21	-	23,768	23,106	3	10	-	-	-	-
Ala.	6	4	15	2	17,969	18,247	4	4	-	3	-	-
Miss.	-	1	10	-	10,681	11,859	1	-	-	-	-	-
W.S. CENTRAL	36	35	153	1	96,757	96,899	119	32	1	74	-	24
Ark.	7	7	16	-	7,958	7,213	-	1	-	4	-	-
La.	3	8	15	-	17,700	16,825	15	5	1	4	-	-
Okla.	4	5	31	-	10,562	10,411	19	6	-	7	-	-
Tex.	22	15	91	1	60,537	62,450	85	20	-	59	-	24
MOUNTAIN	8	-	30	3	23,697	28,445	35	21	4	24	2	2
Mont.	-	-	-	-	961	1,029	-	1	-	-	-	-
Idaho	1	-	-	-	1,159	1,305	-	-	2	1	1	1
Wyo.	-	-	-	-	696	696	-	3	2	4	-	-
Colo.	3	-	14	1	6,419	7,659	3	-	-	2	-	-
N. Mex.	-	-	1	-	3,138	3,079	6	-	-	4	-	-
Ariz.	-	-	6	-	6,197	8,420	19	12	-	5	1	-
Utah	2	-	5	2	1,147	1,414	5	1	-	6	-	1
Nev.	2	-	4	-	3,980	4,843	2	4	-	2	-	-
PACIFIC	72	27	133	5	97,784	115,213	107	115	28	50	-	93
Wash.	8	1	11	-	8,186	9,574	3	2	-	4	-	6
Oreg.	-	-	3	-	5,775	6,759	9	12	1	1	-	1
Calif.	53	25	113	5	79,519	93,704	94	101	27	45	-	64
Alaska	5	1	4	-	2,455	2,899	-	-	-	-	-	1
Hawaii	8	-	2	-	1,849	2,277	1	-	-	-	-	21
Guam	U	-	-	-	81	87	U	U	U	U	U	-
P.R.	1	-	1	-	2,040	2,465	9	15	-	10	-	1
V.I.	-	-	-	-	173	163	-	2	-	1	-	-
Pac. Trust Terr.	U	-	-	-	297	329	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 25, 1982 and September 26, 1981 (38th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	23	763	51	1,277	2,649	33	2,217	31	4,213	47	21	2,018	1,780
NEW ENGLAND	-	39	1	12	79	-	116	5	176	5	2	20	115
Maine	-	-	-	-	5	-	9	-	39	-	-	-	33
N.H.	-	1	1	3	6	-	15	-	14	1	2	10	47
Vt.	-	-	-	2	3	-	8	-	7	-	-	-	-
Mass.	-	24	-	4	55	-	29	5	84	-	-	6	23
R.I.	-	3	-	-	-	-	13	-	15	1	-	1	-
Conn.	-	11	-	3	10	-	42	-	17	3	-	3	12
MID ATLANTIC	5	128	1	160	826	3	396	2	287	14	-	98	209
Upstate N.Y.	-	25	1	111	208	1	140	-	61	6	-	48	100
N.Y. City	5	51	-	41	78	2	74	-	45	-	-	32	52
N.J.	-	26	-	4	56	-	81	1	39	1	-	17	46
Pa.	-	26	-	4	484	-	101	1	122	7	-	1	11
E.N. CENTRAL	1	53	2	76	80	5	264	6	2,174	11	1	166	372
Ohio	1	12	-	1	16	2	93	1	1,563	5	-	-	3
Ind.	-	2	-	2	8	-	26	-	37	2	-	27	129
Ill.	-	11	-	23	23	1	72	2	176	2	1	59	93
Mich.	-	25	2	50	30	2	59	2	298	1	-	48	34
Wis.	-	3	-	-	3	-	14	1	100	1	-	32	113
W.N. CENTRAL	-	19	-	49	10	3	98	-	564	-	2	58	76
Minn.	-	2	-	-	3	1	25	-	437	-	-	5	7
Iowa	-	6	-	-	1	2	9	-	31	-	-	-	4
Mo.	-	5	-	2	1	-	26	-	16	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	12	-	-	-	-	-	1
Kans.	-	2	-	44	1	-	16	-	79	-	2	14	62
S. ATLANTIC	2	109	-	41	407	9	462	6	249	10	2	78	134
Del.	-	4	-	-	-	-	-	3	13	-	-	1	1
Md.	1	17	-	3	5	5	33	1	28	4	-	34	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	1	33	-	14	9	-	55	-	33	1	-	13	6
W. Va.	-	7	-	3	9	-	9	-	88	-	-	1	22
N.C.	-	3	-	-	3	3	87	-	12	4	-	1	5
S.C.	-	4	-	-	2	-	52	-	15	-	-	1	8
Ga.	-	14	-	-	111	-	94	2	15	1	1	12	36
Fla.	-	23	-	20	267	1	130	-	45	-	1	15	55
E.S. CENTRAL	-	7	-	8	5	-	141	2	49	1	1	45	35
Ky.	-	4	-	1	1	-	24	1	16	-	1	27	21
Tenn.	-	-	-	6	2	-	61	1	19	-	-	2	13
Ala.	-	-	-	-	2	-	46	-	8	-	-	-	1
Miss.	-	3	-	1	-	-	10	-	6	1	-	16	-
W.S. CENTRAL	3	56	1	46	844	7	272	4	177	3	5	100	149
Ark.	-	4	-	-	11	-	13	1	7	-	-	1	3
La.	-	4	-	2	4	5	57	-	6	1	-	1	9
Okla.	-	8	-	29	5	-	25	-	-	-	-	3	1
Tex.	3	40	1	15	824	2	177	3	164	2	5	95	136
MOUNTAIN	2	25	8	19	34	-	99	-	86	-	1	77	87
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	10
Colo.	1	10	-	6	10	-	41	-	15	-	-	6	30
N. Mex.	-	3	-	-	8	-	14	-	-	-	-	6	5
Ariz.	1	6	8	13	5	-	18	-	37	-	-	14	20
Utah	-	3	-	-	-	-	8	-	19	-	-	21	5
Nev.	-	-	-	-	10	-	2	-	6	-	1	12	10
PACIFIC	10	327	38	866	364	6	369	6	471	3	7	1,376	603
Wash.	1	18	1	40	3	2	42	-	64	-	-	38	89
Oreg.	-	11	6	19	5	1	69	-	-	-	-	6	53
Calif.	7	293	31	801	349	3	243	5	390	3	7	1,319	445
Alaska	-	1	-	1	-	-	11	-	7	-	-	5	1
Hawaii	2	4	-	5	7	-	4	1	10	-	-	8	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	7	110	275	-	8	-	57	1	-	11	4
V.I.	-	-	-	-	24	-	-	-	3	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 25, 1982 and September 26, 1981 (38th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	23,836	22,236	572	18,584	181	9	290	15	881	4,612
NEW ENGLAND	409	434	17	517	5	-	16	1	9	37
Maine	4	5	2	44	-	-	-	-	-	26
N.H.	1	12	1	18	-	-	-	-	1	1
Vt.	2	13	-	13	-	-	2	-	-	1
Mass.	275	282	9	329	5	-	12	1	5	5
R.I.	19	24	-	23	-	-	-	-	2	-
Conn.	108	98	5	90	-	-	2	-	1	4
MID. ATLANTIC	3,242	3,224	74	3,084	7	2	53	1	34	154
Upstate N.Y.	316	294	12	547	7	-	7	1	12	76
N.Y. City	1,941	1,920	33	1,138	-	1	27	-	1	-
N.J.	453	452	21	621	-	-	11	-	13	14
Pa.	532	558	8	778	-	1	8	-	8	64
E.N. CENTRAL	1,315	1,632	86	2,797	1	1	23	-	77	472
Ohio	228	221	11	470	-	-	11	-	72	69
Ind.	153	205	-	347	-	-	-	-	-	69
Ill.	645	871	47	1,175	-	-	3	-	5	248
Mich.	218	265	28	655	-	1	8	-	-	4
Wis.	71	70	-	150	1	-	1	-	-	82
W.N. CENTRAL	412	476	31	545	28	2	12	2	33	987
Minn.	88	155	15	102	-	1	6	-	-	170
Iowa	24	19	2	56	2	-	1	-	4	317
Mo.	242	263	12	263	20	1	3	-	10	97
N. Dak.	7	7	2	11	-	-	-	-	-	83
S. Dak.	1	2	-	22	1	-	-	-	4	81
Nebr.	11	7	-	20	2	-	1	-	2	108
Kans.	39	23	-	71	3	-	1	2	13	131
S. ATLANTIC	6,511	5,897	112	3,854	10	-	35	7	468	835
Del.	17	11	1	36	-	-	-	-	-	2
Md.	351	441	12	444	1	-	9	2	46	35
D.C.	360	484	6	150	-	-	-	-	-	-
Va.	442	514	8	417	2	-	3	2	74	441
W. Va.	22	17	5	121	-	-	3	1	8	37
N.C.	522	463	14	620	-	-	1	2	200	59
S.C.	384	394	7	367	6	-	3	-	97	46
Ga.	1,367	1,487	35	605	-	-	-	-	40	157
Fla.	3,046	2,086	24	1,094	1	-	16	-	3	58
E.S. CENTRAL	1,669	1,483	63	1,710	8	-	16	1	77	543
Ky.	86	78	12	449	-	-	1	-	1	110
Tenn.	468	546	22	550	6	-	3	1	49	300
Ala.	624	432	14	473	-	-	9	-	12	126
Miss.	491	427	15	238	2	-	3	-	15	7
W.S. CENTRAL	6,282	5,370	67	2,257	91	-	27	2	146	875
Ark.	158	117	7	252	56	-	3	-	25	117
La.	1,421	1,248	-	337	3	-	3	-	2	31
Okla.	130	118	4	257	26	-	2	-	69	159
Tex.	4,573	3,887	56	1,411	6	-	19	2	50	568
MOUNTAIN	586	562	11	521	22	1	12	1	11	236
Mont.	3	11	1	33	2	-	-	1	4	80
Idaho	24	17	-	25	1	-	-	-	2	9
Wyo.	15	8	-	2	2	-	-	-	1	21
Colo.	162	170	4	62	4	-	3	-	1	44
N. Mex.	149	103	1	95	2	-	-	-	1	20
Ariz.	124	135	5	221	-	1	6	-	-	44
Utah	18	21	-	34	11	-	2	-	-	15
Nev.	91	97	-	49	-	-	1	-	2	3
PACIFIC	3,410	3,158	111	3,299	9	3	96	-	6	473
Wash.	109	131	7	209	1	-	6	-	-	6
Oreg.	84	74	4	127	1	-	4	-	1	2
Calif.	3,127	2,888	94	2,682	6	3	82	-	5	387
Alaska	10	11	-	65	1	-	1	-	-	78
Hawaii	80	54	6	216	-	-	3	-	-	-
Guam	1	-	U	34	-	U	-	U	-	-
P.R.	520	505	2	297	-	-	2	-	-	43
V.I.	21	14	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending Septmeber 25, 1982 (38th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	587	372	134	33	19	29	41
Boston, Mass	187	107	50	8	10	12	18
Bridgeport, Conn	40	27	10	2	-	1	5
Cambridge, Mass	16	14	1	1	-	-	-
Fall River, Mass	26	18	5	3	-	-	-
Hartford, Conn	69	43	14	6	2	4	3
Lowell, Mass	17	9	6	1	1	-	-
Lynn, Mass	13	12	1	-	-	-	-
New Bedford, Mass	17	14	2	1	-	-	-
New Haven, Conn	48	31	5	-	2	10	-
Providence, R.I.	43	25	13	3	1	1	6
Somerville, Mass	8	5	2	1	-	-	-
Springfield, Mass	39	22	13	3	1	-	5
Waterbury, Conn	29	20	5	3	1	-	2
Worcester, Mass	35	25	7	1	1	1	2
MID. ATLANTIC	2,244	1,454	524	152	62	52	86
Albany, N.Y.	38	24	4	4	-	6	2
Allentown, Pa	17	13	4	-	-	-	1
Buffalo, N.Y.	120	71	36	6	2	5	15
Camden, N.J.	33	19	6	1	2	5	-
Elizabeth, N.J.	42	31	9	2	-	-	3
Erie, Pa.†	40	25	11	2	2	-	-
Jersey City, N.J.	43	29	10	3	-	1	-
N.Y. City, N.Y.	1,309	859	296	98	33	23	41
Newark, N.J.	67	31	21	6	4	5	2
Paterson, N.J.	24	12	6	3	1	2	-
Philadelphia, Pa.†	113	77	25	6	3	2	6
Pittsburgh, Pa.†	67	37	21	4	4	1	-
Reading, Pa	25	19	3	-	3	-	2
Rochester, N.Y.	112	78	24	9	1	-	8
Schenectady, N.Y.	28	17	8	2	1	-	-
Scranton, Pa.†	22	18	3	-	1	-	1
Syracuse, N.Y.	81	57	19	2	3	-	1
Trenton, N.J.	24	14	9	1	-	-	2
Utica, N.Y.	19	13	4	1	1	-	2
Yonkers, N.Y.	20	10	5	2	1	2	-
E.N. CENTRAL	2,224	1,371	532	142	93	86	72
Akron, Ohio	94	63	15	5	6	5	-
Canton, Ohio	31	20	6	3	2	-	-
Chicago, Ill	513	301	128	34	20	30	13
Cincinnati, Ohio	158	103	38	9	5	3	13
Cleveland, Ohio	164	94	49	11	8	2	6
Columbus, Ohio	141	87	36	7	5	6	2
Dayton, Ohio	108	62	32	9	-	5	4
Detroit, Mich	260	159	64	19	10	8	6
Evansville, Ind	43	31	10	2	-	-	4
Fort Wayne, Ind	56	34	12	4	3	3	4
Gary, Ind	10	4	2	1	2	1	-
Grand Rapids, Mich	35	22	6	3	2	2	-
Indianapolis, Ind	201	113	47	15	16	10	1
Madison, Wis	26	14	8	1	-	3	3
Milwaukee, Wis	145	99	27	10	3	6	6
Peoria, Ill	32	25	5	1	1	-	4
Rockford, Ill	36	20	12	2	-	2	-
South Bend, Ind	42	29	7	2	4	-	2
Toledo, Ohio	65	46	13	2	4	-	2
Youngstown, Ohio	64	45	15	2	2	-	2
W.N. CENTRAL	693	458	138	46	22	29	24
Des Moines, Iowa	23	17	3	1	1	1	1
Duluth, Minn	34	23	9	-	1	1	3
Kansas City, Kans	44	30	9	4	-	1	-
Kansas City, Mo	122	81	23	7	5	6	4
Lincoln, Nebr	17	12	2	2	-	1	-
Minneapolis, Minn	106	69	18	6	4	9	4
Omaha, Nebr	85	49	27	5	2	2	2
St. Louis, Mo	136	100	18	9	6	3	9
St. Paul, Minn	69	47	14	4	2	2	-
Wichita, Kans	57	30	15	8	1	3	1
S. ATLANTIC	1,240	738	308	96	41	57	48
Atlanta, Ga	130	76	31	6	3	14	4
Baltimore, Md	289	170	67	31	12	9	1
Charlotte, N.C.	57	30	13	7	2	5	3
Jacksonville, Fla	104	70	24	7	2	1	5
Miami, Fla	110	54	38	9	6	3	5
Norfolk, Va	40	14	21	-	2	3	4
Richmond, Va	63	29	22	6	2	4	3
Savannah, Ga	49	36	8	3	1	1	3
St. Petersburg, Fla	102	85	10	4	1	2	9
Tampa, Fla	69	45	16	2	3	3	5
Washington, D.C.	177	98	47	18	5	9	3
Wilmington, Del	50	31	11	3	2	3	3
E.S. CENTRAL	678	431	163	42	13	28	29
Birmingham, Ala	73	46	17	6	3	1	5
Chattanooga, Tenn	63	35	17	8	2	1	2
Knoxville, Tenn	59	37	17	1	1	3	2
Louisville, Ky	81	57	17	1	2	4	7
Memphis, Tenn	216	137	57	15	2	4	8
Mobile, Ala	29	19	6	2	-	2	2
Montgomery, Ala	47	28	10	4	-	5	-
Nashville, Tenn	110	72	22	5	3	8	3
W.S. CENTRAL	1,377	780	332	118	91	56	40
Austin, Tex	45	28	8	5	2	2	1
Baton Rouge, La	55	34	10	6	3	2	3
Corpus Christi, Tex	45	26	7	5	6	1	1
Dallas, Tex	165	96	45	10	8	6	4
El Paso, Tex	54	33	10	1	6	4	1
Fort Worth, Tex	106	65	21	9	9	2	6
Houston, Tex	430	199	118	59	35	19	16
Little Rock, Ark	69	39	23	2	3	2	2
New Orleans, La	128	81	27	7	7	6	-
San Antonio, Tex	148	96	31	10	7	4	4
Shreveport, La	48	26	15	2	1	4	1
Tulsa, Okla	84	57	17	2	4	4	1
MOUNTAIN	581	342	138	51	29	19	20
Albuquerque, N.Mex	68	40	17	6	1	4	1
Colo. Springs, Colo	38	22	8	3	4	1	4
Denver, Colo	127	71	31	17	6	2	1
Las Vegas, Nev	56	26	20	6	4	-	2
Ogden, Utah	19	13	3	-	2	1	-
Phoenix, Ariz	112	75	19	7	8	3	4
Pueblo, Colo	28	15	9	1	1	2	2
Salt Lake City, Utah	56	33	9	6	1	5	-
Tucson, Ariz	77	47	22	5	2	1	6
PACIFIC	1,626	1,082	340	101	55	47	86
Berkeley, Calif	23	20	1	2	-	-	1
Fresno, Calif	57	34	14	2	4	3	4
Glendale, Calif	25	21	2	-	1	1	2
Honolulu, Hawaii	58	33	15	5	2	3	6
Long Beach, Calif	88	60	17	3	5	3	3
Los Angeles, Calif	435	297	87	23	17	11	28
Oakland, Calif	49	32	8	5	2	2	2
Pasadena, Calif	27	19	6	2	-	-	2
Portland, Oreg	106	69	23	7	5	2	6
Sacramento, Calif	65	37	15	9	3	1	4
San Diego, Calif	127	87	26	6	3	5	7
San Francisco, Calif	145	99	33	8	2	3	5
San Jose, Calif	166	104	35	17	3	7	4
Seattle, Wash	152	99	40	7	4	2	5
Spokane, Wash	66	46	8	4	3	4	5
Tacoma, Wash	37	25	10	1	1	-	2
TOTAL	11,250††	7,028	2,609	781	425	403	446

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

Streptococcal Abscesses – Continued

ble syringes, vaccine preparation areas, vaccine storage area of the refrigerator, and laboratory incubator. None of the cultures of the staff or environment were positive for Group A streptococcus.

The vaccine was packaged in 7.5-ml vials, which in this practice usually yield 13 or 14, 0.5-ml doses of DTP vaccine. Approximately one-half million doses of this lot had been released for distribution in December 1981. Active surveillance has been established in Milwaukee, Wisconsin, Atlanta, Georgia, and South Carolina, where this lot is actively being used. No cases of abscesses due to Group A streptococcus have been reported from South Carolina or Wisconsin; no further cases have been reported from Georgia.

The pediatric office discontinued use of the particular vaccine lot on Thursday, July 22. Eight unopened vials remaining from this lot were recovered for testing and yielded no bacteria on culture. Thimerosal, the preservative, was present within accepted limits.

Laboratory studies were conducted at CDC to determine the survival of the isolated strain of streptococcus in DTP vaccine from the implicated lot. A varying number of colony-forming units (140 CFU up to 10,000 CFU) of this strain were inoculated into previously unused DTP vaccine vials. Vials were sampled on a regular basis. At 3 days, 29 of 30 vials contained viable streptococci in substantially reduced numbers; at 15 days, one of 30 vials contained one colony of viable streptococci. Initial testing of the lot in 1981, both by the manufacturer and the Office of Biologics, National Center for Drugs and Biologics (NCDB), indicated that the vaccine satisfied requirements for sterility. Additional testing for sterility and Thimerosal content was performed on other vials of the same lot by both the NCDB and the manufacturer after the episode occurred. These results were similarly satisfactory.

Reported by WR Elsea, MD, Fulton County Public Health Dept, JD Lockridge, CC Turner, JW Alley, MD, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human Resources; Respiratory and Special Pathogens Br, Bacterial Disease Div, Center for Infectious Diseases, Surveillance, Investigations, and Research Br, Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: Sterile abscesses are known to occur after administration of DTP vaccine, especially when the injection is given subcutaneously (*1*). However, the occurrence of pyogenic abscesses, especially in clusters, appears to be rare following DTP vaccination. The investigation of this group of abscesses suggests that one multi-dose vial of the lot had become contaminated with Group A streptococci. The source of contamination could not be determined.

Bacterial contamination of multi-dose vials has resulted in cases of serious infections. This is the second cluster of abscesses caused by Group A streptococcus following DTP immunization reported to CDC during the past 18 months. In the other outbreak, seven children developed abscesses after vaccination with DTP vaccine from a different manufacturer (*2*). The strain isolated from these cases and from the remaining vaccine in the multi-dose vial was Group A, T-1, M-1. Neither the nurse nor the physician who had administered this vaccine yielded Group A streptococci when cultured. As in the present outbreak, no source of contamination could be identified.

The choice of a preservative for inclusion in a vaccine is limited on the one hand by possible deleterious effects on the vaccine's antigenicity, and on the other by the vaccine's safety for humans. Thimerosal, the preservative used in the production of DTP, is bacteriostatic, but only weakly bactericidal. The laboratory experiments in this investigation have shown prolonged survival of at least one strain of Group A streptococcus in multi-dose DTP vials.

Use of sterile technique in withdrawing medications and vaccines is critical to preventing contamination of multi-dose vials. Reports of pyogenic abscesses after vaccination should be followed up to determine if vaccine-vial contamination may have occurred; such episodes should be reported to local public health authorities for inclusion in the existing system for

Streptococcal Abscesses — Continued

monitoring illnesses following immunization so that the risk of contamination of multi-dose vaccine vials can be evaluated.

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Notice to Readers

MMWR Subscriptions

In the July 23, 1982, *MMWR*, it was announced that CDC will no longer provide unrestricted free distribution of the *MMWR* after October 1, 1982. Free distribution will be provided to specific groups including, among others, state health officials, deans of schools of public health, and disseminators of public health information. Other individuals and organizations now receiving the publication free of charge will be able to purchase it through the National Technical Information Service (NTIS).

This decision was reached after careful evaluation of the costs of the *MMWR*. Despite an annual renewal requirement, the number of recipients has more than doubled during the past five years. Currently, the cost of printing and postage exceeds $1 million a year.

After determining who should receive the *MMWR* free of charge, CDC began discussions with NTIS to arrange for the development of a paid subscription list. NTIS was created as an agency of the U. S. Department of Commerce as a central source for the public sale of scientific and technical information. The law that established NTIS directs it to be self-sustaining and to recover all costs from the sale of products and services. NTIS made the decision on the cost of the *MMWR* and ancillary publications, and the revenue generated will be used by NTIS to cover its costs. CDC will not pay NTIS for the subscription service, and NTIS will not return any of the revenue to CDC.

The decision to restrict free distribution has been a painful departure from our tradition. It was our judgment that alternatives would have been more damaging to public health.

William H. Foege, M.D.
Director
Centers for Disease Control

Announcement of Poliomyelitis Symposium

An international symposium on poliomyelitis control, sponsored by the Fogarty International Center of the United States National Institutes of Health, and other national and international organizations, will be held March 14-17, 1983, at the Pan American Health Organization's headquarters in Washington, D.C.

For further information contact:

Dr. Earl C. Chamberlayne
Fogarty International Center
Building 16A, Room 205
National Institutes of Health
Bethesda, Maryland 20205

Notice to Readers

Subscription to *MMWR*

As announced in previous issues of the *MMWR*, the *MMWR* and its allied publications will become available on a paid subscription basis on October 1, 1982. A limited number of health officials and disseminators of public health information will continue to receive these publications without charge. Such officials are now being notified.

Subscribers who do not fall into the above categories may continue their subscriptions to the *MMWR* and its allied publications using either of the options described below.

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Perspectives in Disease Prevention and Health Promotion

Carbon Monoxide Intoxication — A Preventable Environmental Health Hazard

Each year in the United States, an estimated 10,000 persons seek medical attention or lose at least one day of normal activity because of carbon monoxide (CO) intoxication; at least 1,500 persons die from accidental exposure to high concentrations of CO; and approximately 2,300 persons commit suicide with CO (*1*). In addition to acute CO poisoning resulting in death, considerable danger may result from daily exposure to low concentrations of CO in houses, work places, and schools. Prolonged periods of exposure may cause headache, dizziness, and sleepiness. Continued exposure brings on nausea, vomiting, heart palpitations, and, from exposure to high levels of CO for prolonged periods, unconsciousness and death.

Although exhaust from any improperly maintained vehicle can pose serious hazards, the most common source of CO is automobile exhaust or exhaust vented into confined spaces. Because gasoline-powered lawnmowers, charcoal grills, wood stoves, fireplaces, gas space heaters, kerosine or gas powered camp lanterns, heaters, stoves, and similar equipment also produce CO, proper ventilation and prevention of CO build-up in confined areas must be assured (*2*). In 1980, the Consumer Product Safety Commission estimated 7.6 million unvented gas space heaters were in use; CO from such heaters caused approximately 70 deaths in 1980 (*3*). Home gas appliances also produce some CO, but under normal, safe-operating conditions, CO occurs in small amounts and should cause no danger when these appliances are properly installed, adjusted, and operated (*2*).

Numerous studies have demonstrated the seriousness of the CO problem. In 1975, a study to determine usual CO levels during a non-summer month in 80 urban and rural households in Fort Collins, Colorado, showed that 6% of the homes had CO concentrations at or above 10 parts per million (ppm)*, and one had 30 ppm CO in the kitchen and family room. A socioeconomic gradient was found; homes in low socioeconomic areas had the highest CO levels. There was no statistical difference between CO levels in urban and rural housing (*4*).

In the mid-1970s, the Allegheny County Health Department, Pittsburgh, Pennsylvania, conducted an investigation and found that 58% of the 33 CO fatalities during a 7-year period were located in low socioeconomic areas. In an effort to reduce these fatalities, the county health department conducted a multi-phase CO-reduction program consisting of public education, action (including distribution of CO dosimeters to and inspections of housing units), and evaluations. This prevention program resulted in a zero CO-fatality rate for the first winter in 8

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*Environmental Protection Agency (EPA) standards for CO are identified at levels of 9 ppm, 8-hour exposure, and 35 ppm, 1-hour exposure, neither to be exceeded more than once per year. EPA is currently considering revisions of these standards.

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Carbon Monoxide — Continued

years (*5*). A 1978 Harvard School of Public Health study of indoor ice skating rinks in the Boston area found that in over 80% of the hours sampled, gasoline-powered ice-resurfacing machines and improper or inadequate venting of exhaust emissions caused levels of CO exceeding the national air-quality standard for exposure (*6*).

Other studies indicate that CO contamination is not limited to buildings. In 1975, the U.S. Department of Transportation demonstrated that a substantial number of school children and bus drivers may be exposed to harmful levels of CO from school buses. No deaths occurred, but many instances of headache, nausea and non-specific illness were reported (*6*). In 1976, the New Mexico Environmental Improvement Agency and CDC recognized the potential for CO poisoning from recreational vehicles. CO concentrations of ≥ 35 ppm were discovered in 172 (14.5%) of the 1,187 units tested for appliance-produced CO. Overall CO concentrations of this magnitude due to engine exhaust fumes leaking into the camper were found in 4.4% of 69 units tested. Over 44% of the 994 appliances individually tested emitted CO at concentrations of ≥ 35 ppm. Unvented ovens and stoves, LPG lamps, and gasoline lanterns contributed most to high overall CO concentrations (*7*)

Reported by Program Development Br, Environmental Health Svcs Div, Center for Environmental Health, CDC.

Editorial Note: CO is a common and lethal gas produced by the incomplete combustion of a solid, liquid, or gaseous fuel and is increased by inadequate air-fuel mixture, insufficient ventilation of combustion gases, and insufficient fresh air intake. It is odorless, colorless, tasteless, and non-irritating, but is often found combined with other gases that may produce a sharp odor and irritate the eyes (*1,8*). CO is absorbed only through the lungs; toxicity occurs when the gas combines with hemoglobin to form carboxyhemoglobin (COHb). Carbon monoxide-bound hemoglobin is unavailable to transport oxygen. Until CO enters the erythrocytes, it behaves like oxygen. When it contacts the erythrocytes, however, its behavior differs sharply; CO affinity for hemoglobin is approximately 210 times greater than that of oxygen. Death can occur when blood contains from 60% to 80% COHb (*1*).

The following guidelines summarize the most important techniques for prevention of CO poisoning.

1. Provide adequate ventilation when using wood stoves and fireplaces, and ensure that all flame-burning appliances are properly installed, adjusted, and operated. Ovens and gas ranges should not be used for heating purposes.
2. Do not operate gasoline-powered engines (automobiles, lawnmowers, etc.) in confined spaces (such as garages or basements).
3. Never burn charcoal inside a home, cabin, recreational vehicle, or tent, whether in a grill, hibachi pot, or fireplace, for cooking or heating.
4. Have only a qualified technician install or convert fuel-burning equipment from one type of fuel to another (*2*).

CO poisoning may increase in coming years because of potential home-heating fuel shortages, energy costs, extraordinary fuel-conservation measures, and a lack of awareness about the preventability of CO poisoning. Health authorities should implement programs advising the public on the hazards associated with exposure to CO.

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Carbon Monoxide — Continued

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Epidemiologic Notes and Reports

Arsenic Contamination in an Abandoned Building — Ohio

Investigators from the National Institute for Occupational Safety and Health (NIOSH) recently re-evaluated residual arsenic contamination in an abandoned building in Norwood, Ohio (*1*). At the request of the local health department, NIOSH had evaluated the same building in 1974 and found it highly contaminated by an arsenic trioxide rodenticide that had been mixed and packaged in the building nearly 40 years earlier.

On October 22, 1981, NIOSH investigators collected 14 dust samples from the floor, walls, and ceiling beams throughout the building and analyzed them for arsenic content by atomic absorption spectrophotometry. Six samples from the floor contained from 3% to 41% arsenic by weight (30,000 to 410,000 parts per million). Five wipe samples from wall surfaces contained from < 0.5 to 310 μg of arsenic per square inch of surface area, and three wipe samples from ceiling-beam surfaces contained from 130 to 2100 μg of arsenic per square inch. (Normal levels are < 0.5 μg.) The highest arsenic concentrations were found in the northeast quadrant of the building—the area where the mixing and packaging had reportedly been done.

On February 2, 1982, NIOSH presented the results to the Norwood City Health Department with recommendations for decontamination and guidelines for protection of workers during decontamination.

Reported by Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: Although most occupational exposure to arsenic is by inhalation, it can also occur through ingestion or skin absorption. Once absorbed, arsenic is widely distributed throughout the body tissues, including the liver, other abdominal viscera, bone, and skin.

Chronic exposure to arsenic, particularly to the trivalent form, manifests itself by: weakness, weight loss, nausea, diarrhea, constipation, skin disorders, hair loss, abdominal pain, pleuritis, and peripheral neuritis. Numerous studies indicate that arsenic compounds, including arsenic trioxide, can cause cancer of the skin, liver, lung, and possibly the lymphatic system (*2,3*).

Arsenic rodenticides are generally effective against Norway and roof rats, but not against house mice. This lack of broad-spectrum effectiveness, coupled with the inherent toxicity of arsenic compounds to man, has led to a decline in the use of arsenic as a rodenticide (*4*). In August 1967, the United States Environmental Protection Agency (EPA) banned arsenic trioxide for home use in concentrations $> 1.5\%$.

To protect workers removing arsenic from a contaminated building, NIOSH recommends the following procedures:

1. The interior of the building should be decontaminated by collecting all loose material, debris,

Arsenic — Continued

etc., with particular attention to material of a gray to white color, which should be packaged and secured for disposal according to EPA hazardous waste disposal guidelines (*5*).

2. Workers involved in decontamination should be adequately safeguarded against exposure to the arsenic-laden material by air-supplied respirators and disposable full-body protective clothing, including hoods, gloves, and footwear.
3. The effectiveness of the decontamination should be assured by the EPA-recommended toxicity test extraction procedure to define those structures, material, etc., that should be classified and handled as hazardous waste (*6*).

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TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	39th Week Ending			Cumulative, First 39 Weeks		
	October 2, 1982	October 3, 1981	Median 1977-1981	October 2, 1982	October 3, 1981	Median 1977-1981
Aseptic meningitis	311	369	314	5,924	6,903	5,160
Brucellosis	2	3	3	119	122	132
Encephalitis: Primary (arthropod-borne & unspec.)	58	74	48	948	1,045	803
Post-infectious	-	-	2	48	70	184
Gonorrhea: Civilian	18,363	19,606	21,532	710,599	751,277	748,038
Military	442	329	425	18,937	21,336	20,500
Hepatitis: Type A	474	426	627	16,544	18,731	21,585
Type B	418	354	327	15,725	15,035	12,373
Non A, Non B	56	N	N	1,638	N	N
Unspecified	245	176	197	6,787	8,126	7,635
Legionellosis	7	N	N	390	N	N
Leprosy	3	14	11	148	199	132
Malaria	26	29	14	791	1,084	556
Measles (rubeola)	10	24	86	1,284	2,646	12,918
Meningococcal infections: Total	36	47	34	2,251	2,710	2,044
Civilian	36	47	34	2,239	2,699	2,028
Military	-	-	-	12	11	15
Mumps	46	61	82	4,258	3,362	11,349
Pertussis	40	18	47	1,097	923	1,252
Rubella (German measles)	9	17	49	2,025	1,797	10,783
Syphilis (Primary & Secondary): Civilian	573	655	607	24,414	22,891	18,342
Military	6	10	10	326	288	234
Tuberculosis	587	590	585	19,174	20,144	20,729
Tularemia	12	7	4	193	205	156
Typhoid fever	4	35	16	298	395	374
Typhus fever, tick-borne (RMSF)	29	24	24	888	1,091	1,025
Rabies, animal	113	127	109	4,733	5,777	3,846

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism (Calif. 1)	57	Paralytic	3
Cholera	-	Psittacosis (Iowa 1, Ariz. 1, Hawaii 1)	89
Congenital rubella syndrome (Va. 1)	6	Rabies, human	-
Diphtheria	2	Tetanus (Ups. NY 1, Fla. 1, La. 1)	64
Leptospirosis (Tex. 1)	44	Trichinosis (Tex. 2)	74
Plague	16	Typhus fever, flea-borne (endemic, murine) (Hawaii 1)	31

TABLE III. Cases of specified notifiable diseases, United States, weeks ending October 2, 1982 and October 3, 1981 (39th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	311	119	948	48	710,599	751,277	474	418	58	245	7	146
NEW ENGLAND	8	3	34	5	17,230	18,542	7	36	1	14	-	1
Maine	-	-	-	-	886	971	1	2	-	-	-	-
N.H.	3	-	5	-	498	667	1	2	-	-	-	-
Vt.	-	-	-	-	325	314	3	-	-	-	-	-
Mass.	4	-	13	-	7,905	7,816	1	10	-	11	-	-
R.I.	1	-	-	1	1,147	1,090	1	5	1	-	-	-
Conn.	-	3	16	4	6,469	7,684	-	17	-	3	-	1
MID. ATLANTIC	39	3	100	10	89,090	90,288	61	81	3	16	-	9
Upstate N.Y.	7	3	38	3	14,972	15,455	8	19	2	-	-	1
N.Y. City	7	-	16	-	36,324	37,592	13	16	-	3	-	6
N.J.	11	-	19	-	16,166	16,641	14	24	1	11	-	1
Pa.	14	-	27	7	21,628	20,600	26	22	-	2	-	1
E.N. CENTRAL	48	1	210	10	96,905	112,525	40	40	-	13	3	3
Ohio	7	1	84	4	27,636	35,090	6	4	-	-	3	-
Ind.	22	-	56	3	12,415	9,730	18	13	-	10	-	-
Ill.	-	-	12	1	23,162	32,691	2	2	-	1	-	3
Mich.	19	-	53	-	24,493	24,697	14	21	-	2	-	-
Wis.	-	-	5	2	9,199	10,317	-	-	-	-	-	-
W.N. CENTRAL	26	14	75	4	33,847	35,496	12	8	3	2	-	4
Minn.	5	1	27	1	4,915	5,558	2	1	1	-	-	2
Iowa	4	3	34	1	3,571	3,928	4	3	1	1	-	-
Mo.	6	4	6	-	16,100	16,417	5	1	-	1	-	1
N. Dak.	-	-	-	-	447	460	-	-	-	-	-	-
S. Dak.	2	1	-	1	914	977	-	-	-	-	-	1
Nebr.	5	2	4	-	1,998	2,604	1	3	-	-	-	-
Kans.	4	3	4	1	5,902	5,564	-	-	1	-	-	-
S. ATLANTIC	47	23	145	8	188,364	185,212	86	110	10	15	1	9
Del.	-	-	-	-	2,995	2,958	1	1	-	-	-	-
Md.	7	-	20	-	23,643	21,705	5	13	2	4	-	3
D.C.	-	-	-	-	10,986	10,583	1	1	-	-	-	-
Va.	6	7	28	1	14,832	17,098	10	19	1	3	-	1
W. Va.	2	-	15	-	2,122	2,817	1	-	-	-	-	-
N.C.	16	-	20	1	29,764	28,461	2	13	-	-	-	-
S.C.	3	2	-	-	18,343	18,068	16	23	1	-	-	-
Ga.	1	3	10	-	36,994	38,632	25	14	1	2	-	1
Fla.	12	11	62	6	48,695	44,992	25	26	5	6	1	4
E.S. CENTRAL	39	11	50	2	62,234	63,089	23	31	11	2	-	-
Ky.	10	-	-	-	8,402	7,786	5	3	1	-	-	-
Tenn.	9	6	25	-	24,497	23,811	9	10	5	-	-	-
Ala.	20	4	15	2	18,330	19,269	7	17	5	2	-	-
Miss.	-	1	10	-	11,005	12,223	2	1	-	-	-	-
W.S. CENTRAL	39	36	159	1	99,253	99,472	106	28	10	128	1	24
Ark.	1	7	16	-	8,150	7,501	1	1	1	6	-	-
La.	10	8	16	-	18,419	17,302	24	-	8	11	-	-
Okla.	11	5	32	-	10,842	10,648	4	2	1	7	1	-
Tex.	17	16	95	1	61,842	64,021	77	25	-	104	-	24
MOUNTAIN	10	-	35	3	24,174	29,236	39	12	2	16	2	2
Mont.	-	-	-	-	994	1,078	1	1	-	-	2	-
Idaho	-	-	-	-	1,174	1,316	1	-	-	-	-	1
Wyo.	-	-	-	-	714	714	1	-	-	-	-	-
Colo.	4	-	17	1	6,889	7,847	8	2	-	3	-	-
N. Mex.	-	-	1	-	3,156	3,180	9	1	-	2	-	-
Ariz.	2	-	8	-	6,315	8,639	11	4	-	7	-	-
Utah	3	-	5	2	1,177	1,466	1	-	-	2	-	1
Nev.	1	-	4	-	4,085	4,996	7	4	2	2	-	-
PACIFIC	58	28	140	5	99,502	117,417	100	72	16	39	-	94
Wash.	2	1	11	-	8,492	9,784	1	4	2	-	-	6
Oreg.	-	-	3	-	5,977	7,034	5	6	-	1	-	1
Calif.	38	26	118	5	80,636	95,248	94	58	12	38	-	65
Alaska	5	1	5	-	2,490	3,002	-	1	1	-	-	1
Hawaii	10	-	3	-	1,905	2,349	-	3	1	-		21
Guam	U	-	-	-	93	89	U	U	U	U	U	-
P.R.	U	-	1	-	2,040	2,465	U	U	U	U	U	1
V.I.	U	-	-	-	173	170	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	207	339	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 2, 1982 and October 3, 1981 (39th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	26	791	10	1,284	2,646	36	2,251	46	4,258	40	9	2,029	1,797
NEW ENGLAND	2	41	-	12	79	1	117	5	180	-	-	20	115
Maine	-	-	-	-	5	-	9	2	41	-	-	-	33
N.H.	-	1	-	3	6	-	15	1	15	-	-	10	47
Vt.	-	-	-	2	3	-	8	-	7	-	-	-	-
Mass.	-	24	-	4	55	1	30	2	85	-	-	6	23
R.I.	-	3	-	-	-	-	13	-	15	-	-	1	-
Conn.	2	13	-	3	10	-	42	-	17	-	-	3	12
MID. ATLANTIC	4	132	1	159	833	5	399	4	271	8	1	99	213
Upstate N.Y.	-	25	1	110	208	-	140	-	61	1	1	49	103
N.Y. City	1	52	-	41	84	1	75	1	46	3	-	32	53
N.J.	2	28	-	4	57	-	81	1	40	-	-	17	46
Pa.	1	27	-	4	484	4	103	2	124	4	-	1	11
E.N. CENTRAL	2	56	-	76	80	6	270	14	2,188	9	2	170	378
Ohio	-	12	-	1	16	1	94	3	1,566	5	-	-	3
Ind.	1	3	-	2	8	2	28	-	37	-	-	27	130
Ill.	-	11	-	23	23	1	73	2	178	3	-	61	96
Mich.	1	26	-	50	30	2	61	5	303	1	1	49	34
Wis.	-	4	-	-	3	-	14	4	104	-	1	33	115
W.N. CENTRAL	-	19	-	49	10	3	101	3	567	-	-	58	77
Minn.	-	2	-	-	3	2	27	-	437	-	-	5	7
Iowa	-	6	-	-	1	-	9	1	32	-	-	-	4
Mo.	-	5	-	2	1	-	26	1	17	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	12	-	-	-	-	-	1
Kans.	-	2	-	44	1	1	17	1	80	-	-	14	63
S. ATLANTIC	4	113	1	42	419	11	473	5	254	5	-	78	134
Del.	-	4	-	-	-	-	-	-	13	-	-	1	1
Md.	1	18	-	3	5	1	34	1	29	-	-	34	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	2	35	-	14	9	-	55	1	34	1	-	13	6
W. Va.	-	7	-	3	9	-	9	1	89	-	-	1	22
N.C.	-	3	-	-	3	5	92	1	13	3	-	1	5
S.C.	-	4	-	-	2	2	54	1	16	-	-	1	8
Ga.	1	15	-	-	111	1	95	-	15	1	-	12	36
Fla.	-	23	1	21	279	2	132	-	45	-	-	15	55
E.S. CENTRAL	1	8	-	7	5	4	145	-	49	2	-	45	35
Ky.	1	5	-	1	1	-	24	-	16	-	-	27	21
Tenn.	-	-	-	6	2	2	63	-	19	2	-	2	13
Ala.	-	-	-	-	2	1	47	-	8	-	-	-	1
Miss.	-	3	-	-	-	1	11	-	6	-	-	16	-
W.S. CENTRAL	2	58	4	50	847	4	276	5	182	11	4	104	153
Ark.	-	4	-	-	13	-	13	-	7	-	-	1	3
La.	-	4	-	2	4	1	58	-	6	8	-	1	9
Okla.	-	8	-	29	5	-	25	-	-	-	-	3	1
Tex.	2	42	4	19	825	3	180	5	169	3	4	99	140
MOUNTAIN	1	27	-	19	34	2	101	3	89	1	-	77	89
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo.	-	-	-	1	-	-	5	-	2	1	-	7	10
Colo.	-	11	-	6	10	1	42	1	16	-	-	6	30
N. Mex.	-	3	-	-	8	-	14	-	-	-	-	6	5
Ariz.	1	7	-	12	5	-	18	1	38	-	-	14	20
Utah	-	3	-	-	-	1	9	1	20	-	-	21	6
Nev.	-	-	-	-	10	-	2	-	6	-	-	12	11
PACIFIC	10	337	4	870	339	-	369	7	478	4	2	1,378	603
Wash.	-	18	-	40	3	-	42	-	64	-	-	38	89
Oreg.	2	13	-	19	5	-	69	-	-	-	-	6	53
Calif.	8	301	4	805	324	-	243	5	395	4	2	1,321	445
Alaska	-	1	-	1	-	-	11	1	8	-	-	5	1
Hawaii	-	4	-	5	7	-	4	1	11	-	-	8	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	U	4	U	110	275	U	8	U	57	U	U	11	4
V.I.	U	-	U	-	24	U	-	U	3	U	U	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 2, 1982 and October 3, 1981 (39th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	24,414	22,891	587	19,174	193	4	296	29	888	4,733
NEW ENGLAND	422	444	16	533	6	-	16	-	9	38
Maine	4	5	2	46	-	-	-	-	-	26
N.H.	1	12	2	20	-	-	-	-	1	1
Vt.	2	13	-	13	-	-	2	-	-	1
Mass.	283	292	8	337	6	-	12	-	5	5
R.I.	19	24	1	24	-	-	-	-	2	-
Conn.	113	98	3	93	-	-	2	-	1	5
MID. ATLANTIC	3,335	3,303	94	3,178	7	-	53	-	34	161
Upstate N.Y.	323	323	5	552	7	-	7	-	12	82
N.Y. City	2,008	1,946	58	1,196	-	-	27	-	1	-
N.J.	461	468	6	627	-	-	11	-	13	15
Pa.	543	566	25	803	-	-	8	-	8	64
E.N. CENTRAL	1,322	1,699	102	2,902	1	-	23	-	77	484
Ohio	228	221	20	490	-	-	11	-	72	72
Ind.	156	220	7	354	-	-	-	-	-	70
Ill.	645	919	49	1,224	-	-	3	-	5	256
Mich.	220	268	23	678	-	-	8	-	-	4
Wis.	73	71	3	156	1	-	1	-	-	82
W.N. CENTRAL	417	496	10	555	28	2	14	1	33	999
Minn.	90	156	-	102	-	-	6	-	-	174
Iowa	24	21	-	56	2	-	1	-	4	321
Mo.	244	276	4	267	20	1	4	-	10	97
N. Dak.	7	7	-	11	-	-	-	-	-	83
S. Dak.	1	2	-	22	1	-	-	-	4	81
Nebr.	11	7	3	23	2	1	2	-	2	110
Kans.	40	27	3	74	3	-	1	1	13	139
S. ATLANTIC	6,703	6,062	142	3,996	11	-	37	21	488	871
Del.	17	12	-	36	-	-	-	-	-	2
Md.	362	452	15	459	1	-	9	2	47	43
D.C.	367	497	4	154	-	-	-	-	-	-
Va.	465	523	10	427	3	-	3	-	72	468
W. Va.	22	17	2	123	-	-	3	-	8	37
N.C.	539	468	29	649	-	-	1	5	205	61
S.C.	403	424	11	378	6	-	3	7	104	50
Ga.	1,401	1,520	25	830	-	-	-	7	47	161
Fla.	3,137	2,149	46	1,140	1	-	18	-	3	59
E.S. CENTRAL	1,712	1,522	44	1,754	8	1	17	3	80	551
Ky.	98	82	16	465	-	1	2	-	1	112
Tenn.	484	559	15	565	6	-	3	2	51	304
Ala.	633	441	7	480	-	-	9	1	13	128
Miss.	497	440	6	244	2	-	3	-	15	7
W.S. CENTRAL	6,437	5,548	95	2,352	99	-	27	4	150	900
Ark.	158	121	12	264	60	-	3	1	26	122
La.	1,456	1,261	9	346	3	-	3	-	2	31
Okla.	138	119	16	273	28	-	2	1	70	160
Tex.	4,685	4,047	58	1,469	8	-	19	2	52	587
MOUNTAIN	602	578	13	534	24	1	13	-	11	248
Mont.	4	11	1	34	3	-	-	-	4	84
Idaho	24	17	-	25	1	-	-	-	2	9
Wyo.	16	8	-	2	3	-	-	-	1	21
Colo.	166	170	5	67	4	-	3	-	1	45
N. Mex.	149	103	1	96	2	-	-	-	1	20
Ariz.	129	145	3	224	-	1	7	-	-	48
Utah	19	22	2	38	11	-	2	-	-	18
Nev.	93	102	1	50	-	-	1	-	2	3
PACIFIC	3,464	3,239	71	3,370	9	-	96	-	6	483
Wash.	109	137	7	216	1	-	6	-	-	6
Oreg.	88	82	5	132	1	-	4	-	1	3
Calif.	3,176	2,954	59	2,741	6	-	82	-	5	396
Alaska	10	11	-	65	1	-	1	-	-	78
Hawaii	81	55	-	216	-	-	3	-	-	-
Guam	1	-	U	35	-	U	-	U	-	-
P.R.	520	506	6	319	-	U	2	U	-	43
V.I.	21	14	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending October 2, 1982 (39th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	606	434	114	32	14	12	35
Boston, Mass.	177	105	48	13	5	6	17
Bridgeport, Conn.	42	30	9	2	-	1	2
Cambridge, Mass.	21	17	3	1	-	-	2
Fall River, Mass.	27	21	5	1	-	-	-
Hartford, Conn.	59	42	8	6	2	1	2
Lowell, Mass.	23	17	5	-	1	-	1
Lynn, Mass.	28	21	5	1	-	1	-
New Bedford, Mass.	23	22	1	-	-	-	-
New Haven, Conn.	41	26	12	-	2	1	-
Providence, R.I.	51	36	9	3	1	2	5
Somerville, Mass.	8	7	1	-	-	-	-
Springfield, Mass.	39	34	2	2	1	-	5
Waterbury, Conn.	24	18	3	2	1	-	1
Worcester, Mass.	43	38	3	1	1	-	-
MID. ATLANTIC	2,603	1,665	591	206	72	67	93
Albany, N.Y.	38	28	7	1	-	2	1
Allentown, Pa.	15	13	2	-	-	-	-
Buffalo, N.Y.	147	102	30	7	4	4	10
Camden, N.J.	45	23	14	1	3	3	1
Elizabeth, N.J.	31	19	6	1	1	4	-
Erie, Pa.†	37	23	10	1	1	2	-
Jersey City, N.J.	46	28	9	2	1	6	-
N.Y. City, N.Y.	1,341	849	290	144	37	21	42
Newark, N.J.	62	24	23	7	2	5	5
Paterson, N.J.	23	16	2	3	-	2	1
Philadelphia, Pa.†	365	217	105	25	12	6	20
Pittsburgh, Pa.†	66	42	20	2	1	1	-
Reading, Pa.	25	18	5	1	1	-	4
Rochester, N.Y.	130	96	22	4	4	4	5
Schenectady, N.Y.	30	23	6	1	-	-	-
Scranton, Pa.†	22	17	5	-	-	-	1
Syracuse, N.Y.	81	55	16	4	4	2	-
Trenton, N.J.	37	23	8	1	1	4	1
Utica, N.Y.	35	27	6	1	-	1	1
Yonkers, N.Y.	27	22	5	-	-	-	1
E.N. CENTRAL	2,208	1,387	528	142	67	81	66
Akron, Ohio	60	40	12	5	3	-	-
Canton, Ohio	54	35	13	2	2	2	1
Chicago, Ill.	475	302	101	41	16	15	6
Cincinnati, Ohio	104	66	25	12	-	1	8
Cleveland, Ohio	132	79	40	6	5	2	2
Columbus, Ohio	138	88	33	6	4	7	7
Dayton, Ohio	114	79	23	3	6	3	4
Detroit, Mich.	274	158	72	22	7	15	6
Evansville, Ind.	67	44	14	5	2	2	6
Fort Wayne, Ind.	55	37	12	3	1	2	2
Gary, Ind.	11	5	4	1	1	-	-
Grand Rapids, Mich.	59	41	12	1	2	2	2
Indianapolis, Ind.	145	88	35	11	4	7	5
Madison, Wis.	45	34	6	-	2	3	3
Milwaukee, Wis.	141	90	37	8	2	4	4
Peoria, Ill.	42	27	8	-	-	7	1
Rockford, Ill.	48	30	13	1	4	-	2
South Bend, Ind.	46	33	10	-	2	1	3
Toledo, Ohio	122	65	42	11	1	3	4
Youngstown, Ohio	74	46	16	4	3	5	-
W.N. CENTRAL	696	477	136	33	20	27	28
Des Moines, Iowa	55	39	13	2	1	-	7
Duluth, Minn.	30	20	6	2	2	1	2
Kansas City, Kans.	35	21	5	4	2	3	1
Kansas City, Mo.	126	83	30	7	2	4	2
Lincoln, Nebr.	24	19	5	-	-	-	-
Minneapolis, Minn.	76	58	14	1	1	2	1
Omaha, Nebr.	78	49	23	-	3	1	5
St. Louis, Mo.	153	106	25	9	4	9	6
St. Paul, Minn.	71	54	8	3	2	4	-
Wichita, Kans.	49	28	10	5	3	3	4
S. ATLANTIC	1,101	691	244	69	38	55	34
Atlanta, Ga.	122	72	31	14	3	2	3
Baltimore, Md.	157	95	34	14	3	11	2
Charlotte, N.C.	68	33	23	4	4	4	1
Jacksonville, Fla.	121	75	28	9	6	3	4
Miami, Fla.	106	58	27	8	8	4	1
Norfolk, Va.	52	31	12	6	1	2	2
Richmond, Va.	104	50	36	6	1	10	3
Savannah, Ga.	44	22	12	4	3	3	2
St. Petersburg, Fla.	81	65	9	1	3	3	8
Tampa, Fla.	83	51	22	-	2	8	2
Washington, D.C. §	125	111	1	3	3	4	3
Wilmington, Del.	39	28	9	-	1	1	3
E.S. CENTRAL	740	448	184	38	31	39	23
Birmingham, Ala.	127	65	39	10	6	7	3
Chattanooga, Tenn.	53	31	14	5	3	-	5
Knoxville, Tenn.	60	39	17	1	1	2	-
Louisville, Ky.	105	64	26	4	5	6	7
Memphis, Tenn.	183	126	32	8	10	7	2
Mobile, Ala.	63	38	15	5	4	1	3
Montgomery, Ala.	46	28	7	-	-	11	1
Nashville, Tenn.	103	57	34	5	2	6	2
W.S. CENTRAL	1,278	729	313	113	68	54	38
Austin, Tex.	50	33	8	3	5	1	1
Baton Rouge, La.	38	24	8	2	2	2	2
Corpus Christi, Tex.	37	20	10	3	2	2	-
Dallas, Tex.	173	90	49	16	11	7	6
El Paso, Tex.	57	39	9	4	1	3	3
Fort Worth, Tex.	106	60	24	4	7	11	3
Houston, Tex.	254	118	73	36	20	7	10
Little Rock, Ark.	50	30	15	1	3	1	2
New Orleans, La.	169	107	41	12	4	5	-
San Antonio, Tex.	184	116	36	19	5	8	8
Shreveport, La.	57	32	17	4	1	3	1
Tulsa, Okla.	103	60	23	9	7	4	3
MOUNTAIN	641	400	151	39	27	24	29
Albuquerque, N.Mex.	75	43	14	8	7	3	3
Colo. Springs, Colo.	29	20	3	4	1	1	4
Denver, Colo.	124	85	25	8	3	3	8
Las Vegas, Nev.	68	34	29	4	1	-	2
Ogden, Utah	23	17	3	-	1	2	2
Phoenix, Ariz.	138	84	36	7	5	6	2
Pueblo, Colo.	25	19	3	1	2	-	1
Salt Lake City, Utah	62	30	14	5	5	8	1
Tucson, Ariz.	97	68	24	2	2	1	6
PACIFIC	1,680	1,065	390	119	54	52	67
Berkeley, Calif.	20	12	6	-	2	-	-
Fresno, Calif.	79	48	17	8	3	3	3
Glendale, Calif.	13	7	4	2	-	-	-
Honolulu, Hawaii	57	33	18	3	2	1	5
Long Beach, Calif.	101	65	28	4	-	4	1
Los Angeles, Calif.	447	287	95	32	17	10	16
Oakland, Calif.	73	52	13	2	2	4	1
Pasadena, Calif.	29	18	4	4	2	1	2
Portland, Oreg.	106	63	28	9	5	1	1
Sacramento, Calif.	68	46	10	10	2	-	2
San Diego, Calif.	150	90	30	17	5	8	15
San Francisco, Calif.	139	88	40	4	1	6	2
San Jose, Calif.	146	89	42	8	4	3	9
Seattle, Wash.	161	107	32	13	6	3	3
Spokane, Wash.	53	33	16	2	1	1	6
Tacoma, Wash.	38	27	7	1	2	1	1
TOTAL	11,560††	7,298	2,053	791	391	411	413

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality May 1982		Estimated number of physician contacts May 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	163,773	834.4	94,823,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	7,773	39.6	5,139,000
Malignant neoplasms (140-208)	1,804,120	36,036	183.6	1,836,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	62,004	315.9	5,654,000
Suicides, homicides (E950-E978)	1,401,880	3,965	20.2	–
Chronic liver disease and cirrhosis (571)	301,070	2,316	11.8	181,000
Cerebrovascular diseases (430-438)	280,430	13,504	68.8	933,000
Pneumonia and influenza[5] (480-487)	124,830	4,338	22.1	800,000
Diabetes mellitus (250)	117,340	2,512	12.8	2,338,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	5,084	25.9	1,051,000
Prenatal care[6]				1,932,000
Infant mortality[6]		3,400	11.1 /1,000 live births	

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[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the mid-point of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 6, September 9, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 5, August 12, 1982, p.1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 6, September 9, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, May 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] Data for "infectious diseases and their sequelae" as a cause of death and physician visits comparable to other multiple-code categories (e.g., "malignant neoplasms") are not presently available.

[6] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 31, No. 5, August 12, 1982, p.1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Non-O1 *Vibrio cholerae* Gastroenteritis — New Hampshire

In September 1981, an isolated case of non-O1 *Vibrio cholerae* gastroenteritis occurred in a Laconia, New Hampshire, resident following consumption of raw clams harvested from New England coastal waters. The patient was a previously healthy 40-year-old woman; her recent travel and personal-contact histories were unremarkable. Within 26 hours after eating the clams, she developed acute abdominal cramps, followed by fever and bloody diarrhea. She was treated symptomatically with rest and oral hydration and recovered without sequelae. Her stool culture grew *V. cholerae* (Smith serotype 361) and no other enteric pathogens. Studies for production of heat-labile and heat-stable toxins were negative. The asymptomatic family members had also eaten the clams; their stool cultures grew only normal flora. Subsequent cultures of shellfish harvested from the same coastal area were negative for vibrio organisms.

The market where the clams were purchased provided names of eight restaurants it routinely supplies, none of which reported any recent gastrointestinal illness among customers or employees. A retrospective review of hospital emergency-room records identified 36 other patients who had presented with gastrointestinal symptoms during the week the index case occurred. Only one had had a stool culture, which grew *Campylobacter jejuni*. All patients were sent food-history questionnaires; none of the 14 respondents reported eating raw shellfish before onset of symptoms or eating at any of the restaurants supplied by the market. After the index case was reported, prospective surveillance was initiated for patients presenting with diarrheal disease at the local emergency room and at a regional medical clinic. Stool cultures were obtained from these patients and screened on thiosulfate-citrate bile salts sucrose (TCBS) agar, a selective medium for vibrio species. No further cases were identified.

This represents the first reported case of non-O1 *V. cholerae* gastroenteritis apparently caused by shellfish from New England waters.

Reported by S MacRae, Dept of Microbiology, T Clements, Dept of Infection Control, Lakes Region General Hospital, J Cournoyer, New Hampshire State Dept of Health and Welfare; Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: Isolated cases of non-O1 *V. cholerae* gastroenteritis have been reported previously in the United States (*1,2*), and outbreaks of intestinal illness caused by this organism have occurred elsewhere (*3-5*). Investigations of recent isolated cases in the United States have demonstrated a statistically significant association between eating raw shellfish and development of disease (*1,2*). Most of these cases have been associated with Gulf Coast oysters.

Environmental studies have demonstrated that the organisms can be found in brackish surface waters and are more numerous during warmer summer months (*1*). A Food and Drug Administration study of 790 samples of randomly selected oysters collected between June 1979 and May 1980 revealed non-O1 *V. cholerae* in 111 samples (14%) (*6*). Some investigators have demonstrated an association between fecal contamination of water and presence of the organism (*1*), but non-O1 *V. cholerae* has been found in waters free of fecal contamination and thus may be a constituent of normal marine flora (*7*).

Although no outbreaks of illness due to this organism have been reported in the United States, it is possible that common-source exposures have occurred in which milder cases have gone undetected and unreported. Non-O1 *V. cholerae* should be included in the differential diagnosis of acute gastroenteritis following ingestion of raw seafood. Diagnosis can be facilitated by culture of stool specimens on TCBS medium.

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Vibrio cholerae gastroenteritis – Continued

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International Notes

Vibrio cholerae—Truk, Federated States of Micronesia

Between August 1 and October 3, 1982, 892 cases of diarrhea and 11 deaths due to diarrhea were reported from Truk, Federated States of Micronesia, Trust Territories of the Pacific Islands. *Vibrio cholerae* O1 has been isolated from stool cultures of 109 persons. CDC has confirmed four of these isolates as biotype El Tor, serotype Inaba.

The outbreak began in early August in the four western outer islands of Pulap, Pulusuk, Puluwat, and Tamatan, where it affected 265 (20%) of 1,300 persons. In early September the outbreak spread to Moen, the capital of Truk, and nine of 17 islands in the Truk lagoon. Control measures have included boiling water, avoiding raw shellfish, and discouraging travel between islands and to other areas of the Pacific. The principal therapy has been oral rehydration solution. Epidemiologic investigations to determine the modes of transmission are underway.

Reported by F Nocon, Guam Dept of Public Health and Social Svcs; N Kansou, MPH, Health Svcs, R Gelder, Laboratory Svcs, Truk, K Aniol, MPH, Medical Svcs, AH Polloi, Territorial Epidemiologist, Federated States of Micronesia, D Kay, Office of Health Svcs, Trust Territories of the Pacific Islands, Saipan; Field Svcs Div, Epidemiology Program Office, Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Erratum, Vol. 31, No. 32

p. 433. In the article, "Arboviral Encephalitis—United States, 1982," three New York State presumptive cases of California encephalitis were reported in persons who died. Follow-up of these serologically presumptive cases has essentially ruled out California encephalitis: one had a 4-fold rise in diagnostic titer to herpes simplex; one had carcinomatous meningitis; and one presented with mental confusion secondary to pneumonia.

Erratum, Vol 31, No. 30

p. 407. In the article, "Dengue Type 2 Virus in East Africa," the sentence beginning on line 6 of the first paragraph should read: "Since the end of March 1982, 15 acute-phase serum samples have been obtained from people who developed febrile illnesses during or after visiting Somalia (2 samples) or coastal Kenya (13 samples)."

The *Morbidity and Mortality Weekly Report* is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Otitis due to *Pseudomonas aeruginosa* Serotype 0:10 Associated with a Mobile Redwood Hot Tub System — North Carolina

From March 19 to April 2, 1982, six cases of *Pseudomonas aeruginosa*, serotype 0:10, infection occurred following common exposure to a hot tub in Orange County, North Carolina. Clinical illness included severe hemorrhagic external otitis, which, although commonly associated with swimming pools, has not been previously reported in the literature for whirlpool/spa settings.

Among 24 members of a university coeducational fraternity who used the implicated tub from March 26 to 29, two had simple dermatitis, and four developed severe external otitis, one of whom, a 19-year-old male, had concurrent cellulitis of the chest wall and thigh. He was hospitalized and treated with intravenous tobramycin for 4 days. His infection began as an area of erythema approximately 1-1/2 inches in diameter below the left nipple, accompanied by tender left axillary adenopathy and a pustule below the right nipple. The patient also noted severe pain and drainage from his left ear. Cultures from the chest pustule and the draining left ear were positive for *P. aeruginosa* serotype 0:10 (resistant to cephalothin, ampicillin, tetracycline, and trimethoprim-sulfamethoxazole and sensitive to gentamicin and carbenicillin). His symptoms began 48 hours after last exposure to the tub. The three other persons with severe external otitis that began within 48 hours of last exposure to the tub visited the student health service for treatment. In two of those, disease was bilateral and was associated with profound erythema or bloody discharge. The first had onset on March 27; the other, with onset on March 29, had a positive culture of ear drainage for *P. aeruginosa* of the same resistance pattern as the 19-year-old male. Neither responded to topical antibiotics, but both were treated successfully with intramuscular gentamicin.

A survey of fraternity members showed an association of illness with exposure to the tub, which was rented and used from March 26 to 29. Of 15 students who responded to a questionnaire, five (described above) met the case definition of ear infection or skin rash developing within 7 days after exposure to this tub. Total duration of exposure to the tub over the 4-day period was significantly associated with illness. Patients had a mean duration of 10.2 hours exposure; non-patients had a mean duration of 5.1 hours exposure ($t = 2.83$, $p < 0.02$). Only one of the five patients had exposure to another recreational water supply, spa, or whirlpool.

The hot tub in question was a portable, self-contained unit constructed of redwood; it measured approximately 6 feet in diameter by 4 feet deep, and held 700 gallons. It was mounted on a trailer for easy transport and had terraced observation decks above and below. The tub was filled with city water, supplied through a garden hose. A recirculation system with a pump, hair trap, dual filter, continuous-feed brominating system, air-introduction port (for a bubbling effect), and propane-fueled heating system were built in. Water could be drained to surrounding

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Otitis – Continued

areas through a port in its base. Temperature was usually maintained at 104 F (40 C).

Inspection and culturing of the tub on April 15, after a previous night's usage at another fraternity, showed a pH 7.6 and free bromine level of < 0.5 parts per million (ppm). Of 12 environmental swabs of the tub, four were positive for *P. aeruginosa* serotype 0:10. No other serotypes were identified in the specimens. The positive sites included [illegible] recirculation port, two areas of the dual filter, and filter intake line.

Procedures involved in maintaining and using the tub were reviewed. Usage peaked during the four evenings, when 15 or more persons at a time were in the tub. Despite written instructions to check the free-bromine level every four hours, water sampling was performed only once before use each day. The tub was emptied and rinsed with water from a garden hose daily, and filters were sprayed with water on March 27 and 28. No hyperbromination or scrubbing of internal surfaces was performed.

Reported by J McCutchan, MD, Student Health Service, University of North Carolina, WA Rutala, PhD, Dept of Epidemiology, University of North Carolina Memorial Hospital, R Holdway, T Laws, Orange County Health Dept, Chapel Hill, N King, MP Hines, DVM, State Epidemiologist, North Carolina State Dept of Human Resources; Field Svcs Div, Epidemiology Program Office, CDC.

Editorial Note: This episode points out the public health risks associated with a hot tub system rented by individuals not trained in its appropriate maintenance and monitoring of pH and bromine (or chlorine) levels. Prior outbreaks of *P. aeruginosa* dermatitis associated with heated whirlpools have generally involved serotype O:11. In most cases, rash was self-limited and resolved within 7 days of onset without antimicrobial therapy. Otitis occurred at low frequencies in two outbreaks (*1,2*). The illness reported here is unusually severe for pool-associated *P. aeruginosa* infection, and investigations indicated duration of exposure as a significant risk factor. After reviewing guidelines for hot tub use, hyperchlorination of the hot tub was instituted before each use. Whether serotype 0:10 may represent a more invasive form of *P. aeruginosa* or whether other factors such as prolonged exposure may have contributed to the development of this spectrum of infection is undetermined at present.

Conditions relating to the design and use of whirlpools and hot tubs present certain sanitation problems often favorable for *P. aeruginosa* (*3*). Water temperature is usually 104 F-108 F (40 C- 42.2 C), and a high bather load often markedly reduces free-chlorine and -bromine levels. Aeration and agitation of water can also quickly deplete disinfectant residuals. Chlorine or bromine should be maintained at a free residual level of 1.5 ppm. Filtration equipment should be inspected and serviced regularly (*4*).

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Sporotrichosis Associated with Wisconsin Sphagnum Moss

On February 2, 1981, the Wisconsin Division of Health, Bureau of Community Health and Prevention (BCHP), was notified of a diagnosis of sporotrichosis in two brothers employed at a garden center in southeastern Wisconsin. An investigation of the garden center by the BCHP revealed two additional cases of sporotrichosis among the employees. All four cases involved male high school students, aged 16 and 17, who worked part-time at the garden center. Each

Sporotrichosis – Continued

had developed an ulcerating lesion on his hand or wrist during December 1980 and was initially treated with antibiotics without resolution. In three of the cases, non-tender ascending lymphangitis subsequently developed. Swabs of the lesions were sent to local hospital laboratories for fungus culture; two were positive for *Sporothrix schenckii.* All four individuals were successfully treated with potassium iodide.

The garden center consists of a retail store and wholesale greenhouse and employs approximately 80 people. Sixteen workers made approximately 1,000 gravesprays* during the months of November and December 1980. The sphagnum moss used was harvested from bogs located in central Wisconsin and was purchased from one wholesale dealer.

Of seven male workers regularly involved in making gravesprays, four developed sporotrichosis. The four ill workers were younger than the other three (mean age 16.5 vs. 31.8 years), had been employed for a shorter time (mean duration of employment 5.5 vs. 134 months), and wore gloves less often. Of three additional male employees who occasionally helped with the production of gravesprays and six female employees who were involved in final decorative preparations, none developed sporotrichosis. In an investigation of a local cemetery where 12 employees produce 2,000-3,000 gravesprays per autumn using sphagnum moss purchased from the same Wisconsin supplier, no additional cases were noted. Samples of the sphagnum moss used in December during the gravespray production at the garden center and tested at the Mycology Laboratory, Wisconsin State Laboratory of Hygiene, were culture-positive for *S. schenckii.* Additional samples of sphagnum moss from fresh bags at the garden center, from the cemetery production site, and from another local garden center were culture negative.

Reported by PL Remington, JM Vergeront, MD, Bureau of Community Health and Prevention, JP Davis, MD, State Epidemiologist, Wisconsin State Dept of Health and Social Svcs; Respiratory and Special Pathogens Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Sporotrichosis is a well-described, yet uncommon, chronic infection caused by *S. schenckii,* a dimorphic fungus present worldwide in soil, plants, and decaying vegetation. Some of the outbreaks reported among florists (*1*) and nursery and forestry workers (*2,3*) have been associated with sphagnum moss grown in Wisconsin (*2-4*). Central Wisconsin, one of the largest areas of sphagnum-moss production in the nation, supplies moss for horticultural use throughout the United States and Japan. Although *S. schenckii* has not been cultured from the Wisconsin bogs where the moss grows, this outbreak demonstrates that positive cultures can be obtained from the moss at its point of usage.

Traumatic inoculation from the fungus results from handling contaminated articles such as wood, rose bushes, or sphagnum moss. Typically, lymphocutaneous sporotrichosis appears after a 1- to 12-week incubation period; it is characterized by a painless papule, usually on an upper extremity, which enlarges and often ulcerates. Subsequently, multiple painless nodules may appear along the route of lymphatic drainage of the original lesion. Sporotrichosis is rarely associated with systemic symptoms. Misdiagnosis of isolated cases has resulted in prolonged antibiotic therapy with significant morbidity and cost to patients (*5*). The diagnosis of sporotrichosis may be made on clinical grounds alone and can be confirmed by culturing *S. schenckii* from a lesion. Lymphocutaneous sporotrichosis is effectively treated with potassium iodide; antifungal agents are reserved for extracutaneous involvement.

This outbreak reconfirms sphagnum moss as a vehicle for sporotrichosis and suggests that workers in contact with the moss may reduce their risk of acquiring disease by wearing protec-

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*A decorative winter covering for grave sites, constructed by weaving balsam boughs through a matting of water-soaked sphagnum moss.

Sporotrichosis – Continued

tive clothing. It also emphasizes the need for physicians to consider the possibility of sporotrichosis when patients present non-healing ulcerating lesions on their extremities.

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Typhoid Fever — Michigan

During October and November 1981, 18 cases of typhoid fever were diagnosed in Jackson, Michigan, among 310 United Way volunteers who consumed a luncheon served at a community banquet hall on October 8, 1981. Although no specific food could be incriminated, a probable chronic carrier of *Salmonella typhi* was identified among the food handlers who prepared the luncheon.

(Continued on page 549)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		40th Week Ending			Cumulative, First 40 Weeks	
	October 9, 1982	October 10, 1981	Median 1977-1981	October 9, 1982	October 10, 1981	Median 1977-1981
Aseptic meningitis	268	307	307	6,191	7,210	5,482
Brucellosis	2	3	3	121	125	136
Encephalitis: Primary (arthropod-borne & unspec.)	32	45	35	980	1,113	848
Post-infectious	-	4	4	48	74	167
Gonorrhea: Civilian	13,065	21,069	21,145	723,787	772,366	766,183
Military	255	543	543	20,508	21,879	21,008
Hepatitis: Type A	386	493	610	16,932	19,224	22,209
Type B	317	482	310	16,045	15,566	12,683
Non A, Non B	42	N	N	1,680	N	N
Unspecified	155	237	222	6,941	8,360	7,857
Legionellosis	16	N	N	406	N	N
Leprosy	2	7	6	148	208	133
Malaria	4	35	28	796	1,121	581
Measles (rubeola)	63	28	83	1,350	2,674	12,957
Meningococcal infections: Total	33	45	34	2,284	2,765	2,078
Civilian	32	45	34	2,271	2,754	2,060
Military	1	-	-	13	11	16
Mumps	45	90	91	4,303	3,452	11,440
Pertussis	44	38	38	1,159	961	1,300
Rubella (German measles)	13	29	42	2,046	1,826	10,825
Syphilis (Primary & Secondary): Civilian	538	617	512	24,978	23,508	18,906
Military	12	3	3	338	289	242
Tuberculosis	397	549	549	19,574	20,693	21,234
Tularemia	6	13	5	199	218	161
Typhoid fever	10	41	12	306	436	391
Typhus fever, tick-borne (RMSF)	19	12	16	905	1,103	1,036
Rabies, animal	92	123	118	4,834	5,900	3,965

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism	58	Paralytic	3
Cholera	-	Psittacosis (Mo. 2, Tex. 1, Ariz 3)	95
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus	64
Leptospirosis (Mo. 1, Ark. 1)	46	Trichinosis	74
Plague (Utah 1)	17	Typhus fever, flea-borne (endemic, murine) (Tex. 2)	33

TABLE III. Cases of specified notifiable diseases, United States, weeks ending October 9, 1982 and October 10, 1981 (40th week)

Reporting Area	Aseptic Menin-gitis	Brucel-losis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	268	121	980	48	723,787	772,366	386	317	42	155	16	148
NEW ENGLAND	19	3	36	5	17,807	19,085	7	30	3	8	2	1
Maine	3	-	-	-	907	999	-	2	-	-	-	-
N.H.	3	-	5	-	524	689	-	1	-	-	-	-
Vt.	-	-	-	-	332	327	2	-	-	-	2	-
Mass.	9	-	14	-	8,144	8,073	3	9	-	3	-	-
R.I.	2	-	-	1	1,177	1,109	1	1	1	-	-	-
Conn.	2	3	17	4	6,723	7,888	1	17	2	5	-	1
MID. ATLANTIC	42	3	106	10	92,003	92,897	55	53	7	12	4	9
Upstate N.Y.	16	3	40	3	15,276	15,596	9	13	3	1	-	1
N.Y. City	2	-	16	-	37,344	38,292	15	12	-	6	-	6
N.J.	12	-	20	-	16,958	17,738	14	20	4	2	-	1
Pa.	12	-	29	7	22,423	21,273	17	8	-	3	4	1
E.N. CENTRAL	76	1	219	10	98,747	115,603	87	67	2	17	6	3
Ohio	37	1	87	4	28,038	36,207	22	22	1	4	5	-
Ind.	4	-	60	3	12,585	9,982	37	16	-	5	-	-
Ill.	-	-	12	1	23,411	33,436	2	4	1	-	-	3
Mich.	35	-	55	-	25,253	25,371	26	25	-	8	1	-
Wis.	-	-	5	2	9,460	10,627	-	-	-	-	-	-
W.N. CENTRAL	11	15	75	4	34,714	38,281	19	10	5	3	1	4
Minn.	-	1	27	1	5,040	5,556	3	-	1	-	-	2
Iowa	1	4	34	1	3,852	3,988	1	1	-	-	-	-
Mo.	4	4	6	-	16,611	16,873	5	3	2	1	-	1
N. Dak.	-	-	-	-	480	461	-	-	-	-	-	-
S. Dak.	-	1	-	1	939	1,007	1	-	-	-	-	1
Nebr.	-	2	4	-	2,084	2,733	3	2	1	-	1	-
Kans.	6	3	4	1	5,948	5,666	6	4	1	2	-	-
S. ATLANTIC	64	23	154	8	191,587	190,059	48	74	6	19	3	9
Del.	-	-	-	-	3,048	3,070	-	1	-	1	-	-
Md.	3	-	20	-	23,808	22,327	1	8	1	1	-	3
D.C.	1	-	-	-	11,382	10,827	-	-	-	-	-	-
Va.	18	7	28	1	15,149	17,507	1	6	1	1	1	1
W. Va.	-	-	15	-	2,197	2,901	3	1	-	-	-	-
N.C.	7	-	22	1	30,564	29,006	2	6	-	5	-	-
S.C.	-	2	-	-	18,905	18,503	4	7	-	-	-	-
Ga.	3	3	14	-	36,994	39,538	17	12	-	-	-	1
Fla.	32	11	55	6	49,559	46,380	20	33	4	11	2	4
E.S. CENTRAL	13	11	52	2	63,846	64,497	29	17	6	3	-	-
Ky.	3	-	1	-	8,607	7,879	17	6	-	3	-	-
Tenn.	4	6	26	-	25,263	24,433	4	8	3	-	-	-
Ala.	6	4	15	2	18,675	19,597	6	3	3	-	-	-
Miss.	-	1	10	-	11,301	12,588	2	-	-	-	-	-
W.S. CENTRAL	30	37	164	1	100,184	101,953	66	32	-	72	-	25
Ark.	-	7	16	-	8,380	7,766	1	3	-	7	-	-
La.	-	8	16	-	18,741	17,822	11	4	-	1	-	-
Okla.	3	5	33	-	11,181	10,959	7	4	-	5	-	-
Tex.	27	17	99	1	61,842	65,407	47	21	-	59	-	25
MOUNTAIN	11	-	35	3	24,788	30,202	53	19	6	15	-	2
Mont.	-	-	-	-	1,018	1,106	1	-	-	-	-	-
Idaho	1	-	-	-	1,206	1,357	1	-	-	-	-	1
Wyo.	-	-	-	-	738	702	-	-	-	-	-	-
Colo.	5	-	17	1	6,722	8,090	9	5	2	8	-	-
N. Mex.	-	-	1	-	3,334	3,320	5	-	-	-	-	-
Ariz.	-	-	8	-	8,478	8,833	33	12	4	6	-	-
Utah	5	-	5	2	1,212	1,513	2	1	-	-	-	1
Nev.	-	-	4	-	4,088	5,121	2	1	-	1	-	-
PACIFIC	2	28	140	5	100,143	121,809	22	15	7	6	-	96
Wash.	1	1	11	-	8,816	10,082	1	4	-	4	-	7
Oreg.	-	-	3	-	6,168	7,187	17	11	6	2	-	1
Calif.	U	26	118	5	80,638	99,004	U	U	U	U	U	66
Alaska	-	1	5	-	2,584	3,118	-	-	-	-	-	1
Hawaii	1	-	3	-	1,937	2,408	4	-	1	-	-	21
Guam	U	-	-	-	97	91	U	U	U	U	U	-
P.R.	U	-	1	-	2,090	2,626	U	U	U	U	U	1
V.I.	-	-	-	-	181	183	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	297	342	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 9, 1982 and October 10, 1981 (40th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	4	796	63	1,351	2,674	33	2,284	45	4,303	44	13	2,045	1,826
NEW ENGLAND	-	41	-	15	79	1	118	-	180	1	1	20	117
Maine	-	-	-	-	5	-	9	-	41	-	-	-	33
N.H.	-	1	-	3	6	-	15	-	15	-	-	10	49
Vt.	-	-	-	2	3	-	8	-	7	-	-	-	-
Mass.	-	24	-	4	55	-	30	-	85	1	-	5	23
R.I.	-	3	-	-	-	-	13	-	15	-	-	1	-
Conn.	-	13	-	6	10	1	43	-	17	-	1	4	12
MID. ATLANTIC	2	134	3	162	843	9	408	6	277	7	2	101	217
Upstate N.Y.	-	25	2	112	209	3	143	5	66	6	-	49	103
N.Y. City	-	52	1	42	87	2	77	-	46	1	1	33	54
N.J.	1	29	-	4	58	-	81	1	41	-	1	18	47
Pa.	1	28	-	4	489	4	107	-	124	-	-	1	13
E.N. CENTRAL	-	57	-	76	81	7	277	19	2,207	23	3	177	382
Ohio	-	12	-	1	16	4	98	10	1,576	5	-	-	3
Ind.	-	3	-	2	9	-	28	-	37	2	1	28	132
Ill.	-	12	-	23	23	-	73	3	181	14	1	65	96
Mich.	-	26	-	50	30	3	64	5	308	1	-	49	34
Wis.	-	4	-	-	3	-	14	1	105	1	1	35	117
W.N. CENTRAL	-	19	-	49	10	1	102	4	571	3	1	59	78
Minn.	-	2	-	-	3	-	27	-	437	-	-	5	7
Iowa	-	6	-	-	1	-	9	-	32	1	-	-	4
Mo.	-	5	-	2	1	-	26	-	17	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	12	-	-	-	-	-	1
Kans.	-	2	-	44	1	1	18	4	84	2	1	15	64
S. ATLANTIC	1	114	-	43	427	12	485	8	262	5	2	80	134
Del.	-	4	-	-	-	-	-	-	13	-	-	1	1
Md.	1	19	-	3	5	-	34	-	29	-	-	34	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	-	35	-	14	9	3	58	1	35	-	-	13	6
W. Va.	-	7	-	3	9	-	9	2	91	-	-	1	22
N.C.	-	3	-	-	3	3	95	3	16	2	-	1	5
S.C.	-	4	-	-	2	-	54	-	16	-	-	1	8
Ga.	-	15	-	-	111	5	100	1	16	1	1	13	36
Fla.	-	23	-	22	287	1	133	1	46	2	1	16	55
E.S. CENTRAL	-	8	-	7	5	-	145	1	50	2	1	46	35
Ky.	-	5	-	1	1	-	24	1	17	-	1	28	21
Tenn.	-	-	-	6	2	-	63	-	19	1	-	2	13
Ala.	-	-	-	-	2	-	47	-	8	-	-	-	1
Miss.	-	3	-	-	-	-	11	-	6	1	-	16	-
W.S. CENTRAL	-	58	60	110	852	2	278	6	188	1	2	106	163
Ark.	-	4	-	-	17	-	13	-	7	-	-	1	3
La.	-	4	-	2	4	-	58	-	6	-	-	1	9
Okla.	-	8	-	29	5	-	27	-	-	-	-	3	1
Tex.	-	42	60	79	826		180	6	175	1	2	101	150
MOUNTAIN	-	27	-	19	35	1	102	-	89	-	1	78	91
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	10
Colo.	-	11	-	6	10	-	42	-	16	-	-	6	30
N. Mex.	-	3	-	-	8	1	15	-	-	-	-	6	5
Ariz.	-	7	-	12	5	-	18	-	38	-	-	14	20
Utah	-	3	-	-	-	-	9	-	20	-	1	22	8
Nev.	-	-	-	-	10	-	2	-	6	-	-	12	11
PACIFIC	1	338	-	870	342	-	369	1	479	2	-	1,378	609
Wash.	1	19	-	40	3	-	42	-	64	2	-	38	59
Oreg.	-	13	-	19	5	-	69	-	-	-	-	6	83
Calif.	U	301	U	805	327	U	243	U	395	U	U	1,321	451
Alaska	-	1	-	1	-	-	11	1	9	-	-	5	1
Hawaii	-	4	-	5	7	-	4	-	11	-	-	8	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	U	4	U	113	280	U	8	U	67	U	U	11	4
V.I.	-	-	-	-	24	-	-	-	3	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 9, 1982 and October 10, 1981 (40th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	24,978	23,508	397	19,574	199	10	306	19	905	4,834
NEW ENGLAND	442	453	2	535	6	1	17	-	9	38
Maine	4	5	-	46	-	-	-	-	-	26
N.H.	1	12	-	20	-	-	-	-	1	1
Vt.	2	14	-	13	-	-	2	-	-	1
Mass.	300	297	2	339	6	1	13	-	5	5
R.I.	19	28	-	24	-	-	-	-	2	-
Conn.	116	99	-	93	-	-	2	-	1	8
MID. ATLANTIC	3,409	3,426	102	3,280	7	2	56	3	37	167
Upstate N.Y.	334	326	16	568	7	-	7	-	12	66
N.Y. City	2,053	2,044	40	1,236	-	2	29	-	1	-
N.J.	464	485	16	643	-	-	11	-	13	16
Pa.	558	572	30	833	-	-	8	3	11	85
E.N. CENTRAL	1,338	1,788	93	2,991	1	1	24	3	80	488
Ohio	238	228	9	489	-	-	11	3	75	72
Ind.	156	234	25	379	-	1	1	-	-	70
Ill.	645	939	50	1,274	-	-	3	-	5	259
Mich.	225	293	8	682	-	-	8	-	-	5
Wis.	74	74	1	157	1	-	1	-	-	82
W.N. CENTRAL	427	510	13	571	30	-	14	-	33	1,020
Minn.	96	160	2	104	-	-	6	-	-	174
Iowa	24	21	1	57	2	-	1	-	4	326
Mo.	248	286	6	275	20	-	4	-	10	101
N. Dak.	7	7	-	12	-	-	-	-	-	85
S. Dak.	1	2	2	26	1	-	-	-	4	88
Nebr.	11	7	-	23	3	-	2	-	2	111
Kans.	40	27	-	74	4	-	1	-	13	135
S. ATLANTIC	6,884	6,215	74	4,065	11	3	40	7	492	883
Del.	19	13	2	38	-	-	-	-	-	2
Md.	367	461	-	459	1	-	9	1	48	44
D.C.	375	514	7	161	-	-	-	-	-	-
Va.	486	529	13	440	3	1	4	1	72	470
W. Va.	22	17	3	126	-	1	4	-	8	37
N.C.	559	492	9	654	-	1	2	3	208	62
S.C.	420	428	9	386	6	-	3	-	104	51
Ga.	1,438	1,548	8	638	-	-	-	-	47	167
Fla.	3,218	2,213	23	1,163	1	-	18	2	5	50
E.S. CENTRAL	1,755	1,862	42	1,796	8	-	17	5	85	558
Ky.	98	85	10	475	-	-	2	-	1	114
Tenn.	499	564	12	577	6	-	3	3	54	308
Ala.	656	452	12	492	-	-	9	1	14	129
Miss.	502	461	8	252	2	-	3	1	16	7
W.S. CENTRAL	6,610	5,683	53	2,405	101	3	30	1	152	934
Ark.	163	124	10	274	62	-	3	-	26	126
La.	1,489	1,293	8	354	3	-	3	-	2	31
Okla.	143	122	-	273	28	1	3	-	71	163
Tex.	4,815	4,124	35	1,504	8	2	21	1	53	614
MOUNTAIN	623	583	11	645	28	-	13	-	11	250
Mont.	5	11	1	35	3	-	-	-	4	84
Idaho	24	17	1	26	1	-	-	-	2	9
Wyo.	16	9	-	2	5	-	-	-	1	21
Colo.	172	172	1	68	4	-	3	-	1	46
N. Mex.	149	103	2	98	2	-	-	-	1	23
Ariz.	145	148	2	226	-	-	7	-	-	48
Utah	19	22	-	36	11	-	2	-	-	17
Nev.	93	103	4	54	-	-	1	-	2	3
PACIFIC	3,490	3,338	7	3,386	9	-	96	-	6	485
Wash.	128	140	4	220	1	-	6	-	-	7
Oreg.	90	83	-	132	1	-	4	-	1	3
Calif.	3,176	3,049	U	2,741	6	U	82	U	5	396
Alaska	11	11	-	74	1	-	1	-	-	79
Hawaii	85	55	3	219	-	-	3	-	-	-
Guam	1	-	U	36	-	U	-	U	-	-
P.R.	547	524	U	319	-	U	2	U	-	43
V.I.	21	15	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending October 9, 1982 (40th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	663	432	154	37	18	22	43
Boston, Mass	174	95	54	9	7	9	17
Bridgeport, Conn	39	28	6	6	1	-	4
Cambridge, Mass	25	20	3	2	-	-	2
Fall River, Mass	34	21	11	2	-	-	-
Hartford, Conn	83	51	16	2	7	7	3
Lowell, Mass	18	11	5	1	1	-	-
Lynn, Mass	19	14	5	-	-	-	-
New Bedford, Mass	25	21	3	1	-	-	2
New Haven, Conn	43	29	6	5	1	2	4
Providence, R.I	57	37	14	2	1	3	2
Somerville, Mass	11	9	2	-	-	-	-
Springfield, Mass	44	30	10	3	-	1	4
Waterbury, Conn	24	18	5	1	-	-	1
Worcester, Mass	67	50	14	3	-	-	4
MID ATLANTIC	2,454	1,647	513	162	64	67	83
Albany, N.Y	60	36	15	4	1	4	1
Allentown, Pa	18	15	3	-	-	-	-
Buffalo, N.Y	119	76	30	6	5	2	10
Camden, N.J	22	11	5	4	2	-	1
Elizabeth, N.J	20	17	2	1	-	-	-
Erie, Pa†	27	22	4	-	-	1	-
Jersey City, N.J	53	37	12	1	3	-	-
N.Y. City, N.Y	1,372	913	282	105	32	40	37
Newark, N.J	69	43	14	7	4	1	5
Paterson, N.J §	23	19	-	1	1	1	1
Philadelphia, Pa†	205	129	47	15	6	8	12
Pittsburgh, Pa†	74	49	20	2	2	1	2
Reading, Pa	34	26	8	-	-	-	3
Rochester, N.Y	126	90	23	7	2	4	3
Schenectady, N.Y	34	25	5	2	1	1	1
Scranton, Pa†	19	17	2	-	-	-	1
Syracuse, N.Y	91	62	18	4	3	4	1
Trenton, N.J	46	29	15	2	-	-	-
Utica, N.Y	21	15	3	1	2	-	2
Yonkers, N.Y	21	16	5	-	-	-	3
E.N. CENTRAL	2,276	1,400	545	151	82	97	57
Akron, Ohio	66	44	16	-	3	3	-
Canton, Ohio	47	24	16	3	2	2	1
Chicago, Ill	513	288	141	49	19	16	7
Cincinnati, Ohio	135	80	34	10	4	7	15
Cleveland, Ohio	178	98	44	13	8	15	2
Columbus, Ohio	137	85	34	6	6	6	3
Dayton, Ohio	104	69	25	5	5	-	2
Detroit, Mich	271	167	53	24	15	12	3
Evansville, Ind	36	27	6	1	1	1	3
Fort Wayne, Ind	53	37	12	1	2	1	1
Gary, Ind	22	8	8	4	-	2	-
Grand Rapids, Mich	62	40	11	4	3	4	1
Indianapolis, Ind	169	97	49	7	3	13	1
Madison, Wis	53	28	15	6	1	3	2
Milwaukee, Wis	134	89	34	5	1	5	6
Peoria, Ill	34	24	5	2	2	1	2
Rockford, Ill	44	32	10	2	-	-	3
South Bend, Ind §	43	39	-	1	1	1	2
Toledo, Ohio	109	81	18	6	2	2	3
Youngstown, Ohio	66	43	14	2	4	3	-
W.N. CENTRAL	734	505	139	34	29	27	43
Des Moines, Iowa	81	61	9	5	4	2	2
Duluth, Minn	34	26	7	-	1	-	4
Kansas City, Kans	37	20	11	3	2	1	1
Kansas City, Mo	119	79	26	3	2	9	5
Lincoln, Nebr	47	42	3	-	2	-	6
Minneapolis, Minn	86	56	18	3	2	7	1
Omaha, Nebr	80	55	20	3	2	-	7
St. Louis, Mo	132	83	24	12	6	7	11
St. Paul, Minn	66	49	9	3	4	1	1
Wichita, Kans	52	34	12	2	4	-	5
S. ATLANTIC	1,048	674	219	78	37	40	36
Atlanta, Ga	122	71	30	15	3	3	6
Baltimore, Md	208	113	59	18	14	4	2
Charlotte, N.C	46	25	8	5	3	5	1
Jacksonville, Fla	90	53	27	4	2	4	3
Miami, Fla	103	69	21	8	2	3	2
Norfolk, Va	57	32	17	5	-	3	4
Richmond, Va	82	51	15	8	3	5	4
Savannah, Ga	39	22	12	2	2	1	5
St. Petersburg, Fla	78	67	10	-	-	1	3
Tampa, Fla	69	45	8	5	4	7	4
Washington, D.C. §	106	94	1	3	2	4	2
Wilmington, Del	48	32	11	3	2	-	-
E.S. CENTRAL	722	438	182	44	29	29	17
Birmingham, Ala	117	63	34	5	7	8	-
Chattanooga, Tenn	54	40	8	5	1	-	2
Knoxville, Tenn	38	28	8	-	1	1	2
Louisville, Ky	116	62	38	10	2	4	4
Memphis, Tenn	173	109	39	13	8	4	5
Mobile, Ala	67	35	18	5	2	7	2
Montgomery, Ala	52	36	9	2	2	3	1
Nashville, Tenn	105	65	28	4	6	2	1
W.S. CENTRAL	1,290	717	327	110	79	57	37
Austin, Tex	63	43	11	5	2	2	4
Baton Rouge, La	39	24	7	3	2	3	2
Corpus Christi, Tex	44	25	13	1	3	2	-
Dallas, Tex	184	93	51	13	9	18	-
El Paso, Tex	39	24	8	5	1	1	3
Fort Worth, Tex	85	61	16	3	2	3	7
Houston, Tex	383	190	102	44	37	10	11
Little Rock, Ark	53	28	17	3	2	3	3
New Orleans, La	110	58	35	11	5	1	-
San Antonio, Tex	144	76	36	15	10	7	5
Shreveport, La	70	46	13	4	4	3	-
Tulsa, Okla	76	49	18	3	2	4	2
MOUNTAIN	605	362	118	61	24	40	25
Albuquerque, N.Mex	62	35	13	10	1	3	3
Colo. Springs, Colo	39	21	6	7	1	4	4
Denver, Colo	122	68	24	7	3	20	6
Las Vegas, Nev	61	34	17	6	3	1	-
Ogden, Utah	23	16	2	1	1	3	3
Phoenix, Ariz	144	91	23	18	9	3	3
Pueblo, Colo	26	14	9	2	1	-	2
Salt Lake City, Utah	45	28	9	4	2	2	-
Tucson, Ariz	83	55	15	6	3	4	4
PACIFIC	1,700	1,118	348	125	67	49	77
Berkeley, Calif	24	20	3	1	-	-	1
Fresno, Calif	74	53	11	3	5	2	-
Glendale, Calif	38	32	3	1	-	2	1
Honolulu, Hawaii	65	37	16	6	3	3	4
Long Beach, Calif	101	65	25	8	2	1	7
Los Angeles, Calif	574	385	119	51	22	16	24
Oakland, Calif	65	43	16	4	1	1	3
Pasadena, Calif	27	20	2	1	1	3	3
Portland, Oreg	109	73	25	5	2	4	4
Sacramento, Calif. §	67	63	-	-	2	-	3
San Diego, Calif	103	58	30	7	6	2	9
San Francisco, Calif	125	76	30	11	3	5	-
San Jose, Calif	132	84	24	15	6	3	7
Seattle, Wash	122	81	28	7	2	4	4
Spokane, Wash	50	30	12	4	2	2	4
Tacoma, Wash	24	18	4	1	-	1	3
TOTAL	11,492††	7,293	2,546	800	419	428	418

---

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Typhoid Fever – Continued

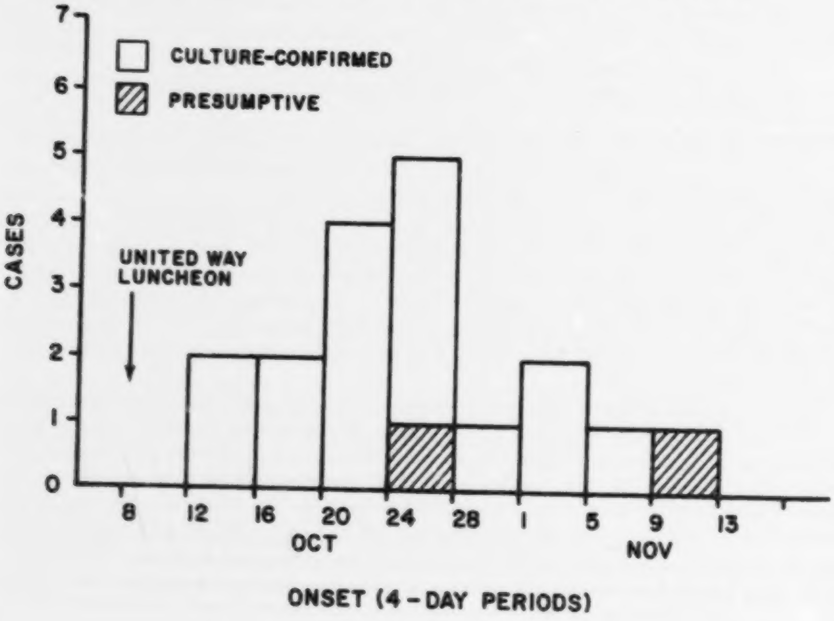
Dates of onset ranged from October 12 to November 11, 1981 (Figure 1), for an incubation period of 4 to 33 days (mean = 13.5). Older individuals tended to have shorter incubation periods. The attack rate was 5.8%. Sixteen of the 18 cases were confirmed by blood and/or stool culture. All isolates of *S. typhi* were phage type E_1 and were sensitive to chloramphenicol, ampicillin, and trimethoprim-sulfamethoxazole.

All patients experienced fever (mean temperature 103.3 F [39.6 C]), fatigue, and headache, and most had chills, sweats, and anorexia; 39% reported diarrhea, and 33% had constipation. There were four relapses (rate = 22%) of which only one was symptomatic. No instances of gastrointestinal hemorrhage or perforation were reported. There were no deaths and no evidence of secondary transmission.

Self-administered questionnaires asking about foods eaten at the luncheon and subsequent illness were distributed to all attendees; 289 (93%) returned completed questionnaires. Food histories of the 16 culture-confirmed cases were compared with those of asymptomatic controls. Univariate testing did not identify any single food associated with illness. Multivariate logistic regression analysis (using different control groups and different weighting of responses and carried out in forward and backward stepwise fashion) also failed to incriminate any food item.

A probable chronic carrier of *S. typhi* was identified among the food handlers. This individual, an asymptomatic 68-year-old female with previously undiagnosed cholelithiasis, had participated in the preparation of all or most of the foods served. *S. typhi* of the same phage type and antimicrobial-sensitivity pattern as that obtained from cases was isolated from her rectal swab and all her stool specimens; the serum Vi antibody titer was 20. She subsequently

FIGURE 1. Cases of typhoid fever by date of onset – Jackson, Michigan, 1981



Typhoid Fever – Continued

underwent cholecystectomy in combination with high-dose amoxicillin therapy. Culture of the gallstone after antimicrobial therapy and all follow-up stool cultures have been negative.

Reported by D Ray, MPH, D Tribby, DVM, Jackson County Health Dept, J Eyster, PhD, S Coopes, W Hall, MD, H McGee, MPH, E Renshaw Jr, PhD, G Winter, N Hayner, MD, State Epidemiologist, Michigan Dept of Public Health; Field Services Div, Epidemiology Program Office, Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The incidence of typhoid fever in the United States has decreased dramatically over the past 50 years (*1*). About 350-600 cases have been reported annually since 1965 when the incidence rate stabilized. The majority of cases in the United States are now acquired overseas (*2*), the most common source countries being Mexico (50%) and India (15%).

Typhoid outbreaks, especially in communities, have occurred only rarely in the United States in recent years (*3*); contamination of food and water by a previously unrecognized chronic carrier is usually responsible. The carrier state is now rare in the United States, although its exact prevalence is unknown. Routine stool culturing of food handlers is considered unjustified (*4*).

Multivariate regression analysis can be useful in identifying the vehicle or vehicles in a foodborne outbreak. In this outbreak, however, the technique was not successful because of 1) the small number of cases, 2) minimal variation in food-consumption patterns resulting from the limited menu, and 3) unreliable food histories due to the extended period between transmission and the administration of the questionnaire.

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False-Positive Blood Cultures Associated with Automated Blood-Culture Analyzers — Massachusetts

From July to September 1981, two Boston, Massachusetts, hospitals reported blood cultures positive for *Staphylococcus aureus* resulting from cross-contamination of the cultures on automated radiometric blood-culture analyzers. The reports follow.

Report No. 1: Between July 31 and August 6, 1981, 24 blood cultures from 12 patients at the Faulkner Hospital were positive for *S. aureus*, phage type 94/96. Since only one of the patients had a clinical illness compatible with *S. aureus* bacteremic infection, microbiology laboratory equipment and techniques were examined to identify a possible cause for the false-positive blood cultures. As part of the evaluation, tubing connecting the needles to both the flush and sampling circuits were cultured; both yielded *S. aureus* of the same phage type obtained from the contaminated blood cultures.

To confirm the possibility of cross-contamination on the Bactec 640 blood-culture analyzer, a blood-culture bottle was inoculated with *S. aureus* and processed routinely; bacteria from this bottle were transferred sequentially to test bottles of sterile culture medium sampled on the machine. Evaluation of the blood-culture analyzer by the manufacturer indicated that it was operating satisfactorily. Review of operating procedures for the machine in the laboratory revealed that several recommended operating and quality-control specifications had not been followed. After these procedures were corrected and the contaminated tubing was changed, the cross-contamination experiment was repeated and again resulted in transmission of bacte-

Blood Cultures – Continued

ria by the machine. Further examination of the machine by the manufacturer failed to identify a specific problem; after the analyzer was replaced, however, no further episodes of cross-contamination occurred.

Report No. 2: From September 16 to September 22, 1981, blood cultures from four patients at the Boston City Hospital became postive for oxacillin-resistant *S. aureus*. An investigation to identify a common source showed that only one patient was infected with this organism; the other three patients were not colonized and had not been exposed to other patients infected with this strain of *S. aureus*. The four blood cultures had been obtained the same day and processed sequentially on the Bactec 640 automated blood-culture analyzer; they became positive 2, 4, 7, and 8 days, respectively, after being obtained. During an experimental trial using a blood-culture bottle inoculated with the oxacillin-resistant *S. aureus*, cross-contamination was documented from the initial blood-culture bottle to three of nine bottles subsequently processed by the analyzer in which bubbles of culture medium were present in the neck of the bottle; cross-contamination did not occur to any of the nine bottles in which bubbles were not present.

Review of blood-culture data for the 7 months preceding this episode identified 20 additional episodes of probable cross-contamination; eight involved *S. aureus*; 10, *S. epidermidis*; one, *Escherichia coli*; and one, satellite-forming *Streptococcus*. In each instance, cross-contaminated cultures became positive later than the true positive blood cultures (mean 4.1 days compared with 1.6 days; $t=4.32$, $p < 0.001$). Cross-contamination episodes had occurred with all seven technicians who used the analyzer.

Review of laboratory procedures for the blood-culture analyzer indicated the machine was being properly maintained and that the needles were cleaned, checked, and sterilized according to the manufacturer's instructions. Examination of the analyzer by the manufacturer indicated malfunction of the needle sterilizer; after the sterilizing unit and computer board controlling its function were replaced, experimental cross-contamination no longer occurred on the unit, and no further episodes of cross-contamination occurred.

Reported by SA Weinstein, MPH, B Weinstein, MD, FO Escobar, BC Fine, MD, Faulkner Hospital, DE Craven, MD, DL Lichtenberg, K Browne, D Coffee, T Treadwell, MD, WR McCabe, MD, Maxwell Finland Laboratory for Infectious Diseases, Boston City Hospital, Boston, NJ Fiumara, MD, State Epidemiologist, Massachusetts State Dept of Public Health; Hospital Infections Program, Center for Infectious Diseases, CDC.

Editorial Note: False-positive blood cultures may create unnecessary concern for patients and physicians and may result in additional laboratory tests and costs and in unnecessary treatment of patients. Blood cultures in both hospitals were processed on analyzers that operate by detecting radioisotopically labeled gases produced by microorganisms growing in the special culture medium. The gases are sampled in each blood-culture bottle by two needles that simultaneously puncture the rubber diaphragm of the culture bottle; the gas in the space above the culture medium is flushed into the sampling needle by a mixture of inert gases entering the bottle through the other needle. After sampling each unit, the needles are withdrawn, and the tips are heat-sterilized automatically by the machine before being inserted into the next culture bottle for sampling. The problem resolved after replacement of the needle-sterilizing unit in the analyzer in one hospital and after replacement of the entire analyzer in the other.

The *Morbidity and Mortality Weekly Report* is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

Blood Cultures – Continued

Radiometric blood-culture analyzers of the type used in these hospitals are used widely in hospital laboratories; they have been associated with clusters of false-positive blood cultures in the past (*1,2*). In one instance, cross-contamination apparently occurred because the needle probes on the machine were not changed, cleaned, and sterilized daily (*1*); in the other, the power unit and circuit boards controlling heat sterilization of the needle probes malfunctioned and had to be replaced (*2*). Cross-contamination with a variety of organisms apparently can occur, although this is the first documented report of cross-contamination with *S. aureus* on these machines. The problems were detected through a combination of surveillance and clinical judgment about the incompatability between culture results and patient illness. Report number 1 is also unique in that no specific malfunction of the machine could be identified, and contamination of the tubing attached to the needles occurred. The analyzer cannot sterilize tubing once contaminated. These reports also suggest that bubbles of media in the necks of the culture bottles may greatly increase the probability of cross-contamination.

In some laboratories, use of the radiometric blood-culture analyzers may decrease the time between obtaining a blood culture and detection of bacterial growth. Laboratory personnel must be aware that these machines can malfunction, allowing cross-contamination to occur. Prevention of these problems depends on carefully following recommended procedures for maintenance and operation of the machine and periodic review of laboratory log books to try to detect the occurrence of unusual clusters of positive blood cultures that might be caused by cross-contamination on the analyzer.

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Epidemiologic Notes and Reports

Fatal Diphtheria — Wisconsin

A fatal case of diphtheria was recently reported to the Wisconsin State Department of Health and Social Services (*1*). A 9-year-old unimmunized female developed listlessness and a sore throat on June 30, 1982, 10 days after arriving at a camp in Colorado operated by a religious group that does not accept immunizations. On July 3, she returned to Wisconsin on a camp bus along with other unimmunized children and adults who had also attended the camp. On July 6, a physician evaluated the patient for her sore throat; a throat culture was taken and oral penicillin prescribed. The patient was hospitalized on July 8 for persistent sore throat, diminished fluid intake, and gingival bleeding. Laboratory tests revealed a white blood cell count of 26,500 /mm^3 with 92% polymorphonuclear cells, a blood urea nitrogen of 214 mg/dl, a creatinine of 12.4 mg/dl, and a platelet count of 10,000/mm^3. The throat culture obtained July 6 was reported to contain normal flora, group A beta hemolytic streptococci, and large numbers of diphtheroids. The patient was transferred on July 8 to a tertiary care children's hospital.

On admission, she was afebrile and had moderate upper airway obstruction, diffuse ecchymoses, bleeding from the nose and gums, prominent cervical adenopathy, and swelling of the jaw and throat. Initially, the pharynx was poorly visualized due to trismus. On later examination, it revealed severe hemorrhagic and necrotic tonsillitis; no membrane was observed. Treatment with penicillin G, gentamycin, moxalactam, peritoneal dialysis, and platelet transfusions was instituted. The hospital course was complicated by disseminated intravascular coagulation, cardiac conduction abnormalities, and mental confusion. The patient died on July 14. A *Corynebacterium* species isolated from a throat culture obtained July 10 was subsequently confirmed by the Milwaukee Bureau of Laboratories and State Laboratory of Hygiene to be a toxigenic strain of *C. diphtheriae*.

An investigation was undertaken to determine the source of exposure to *C. diphtheriae* and to identify and evaluate the patient's contacts. The camp session had been attended by 108 employees, campers, and counselors from Wisconsin and 12 other states; many were unimmunized. In addition, 119 immediate and extended family members and hospital employees in Wisconsin, who might have had close contact with the patient after onset of illness, were identified. With the aid of state and local health departments and private physicians, 224 of the 227 contacts were evaluated. None reported respiratory illness before or after exposure to the patient, and nasopharyngeal or throat cultures obtained from 218 contacts were negative for *C. diphtheriae*.

Reported by SD Davis, MD, Milwaukee Children's Hospital, R Kellner, JP Davis, MD, State Epidemiologist, Wisconsin State Dept of Health and Social Svcs; RS Hopkins, MD, State Epidemiologist, Colorado State Dept of Health; PM Hotchkiss, DVM, State Epidemiologist, Arizona State Dept of Health Svcs; J Chin, MD, State Epidemiologist, California Dept of Health Svcs; ME Levy, MD, District of Columbia Dept of Human Svcs; JJ Sacks, MD, Acting State Epidemiologist, Florida State Dept of Health; BJ Francis, MD, State

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Fatal Diphtheria – Continued

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Editorial Note: The last reported case of diphtheria in Wisconsin occurred in 1979, and the last reported case in Colorado occurred in 1978. This is the first reported diphtheria-associated fatality in Wisconsin since 1968; none has been reported in Colorado since 1976. Nationally, the number of reported diphtheria cases declined steadily from 435 in 1970 to five in 1981 (*2*). The average annual incidence rate of reported diphtheria in the United States has declined from 0.13 cases per 100,000 population for 1970-1975 to 0.03/100,000 for 1976-1981. The mortality rate from all types of diphtheria has declined from 0.015 deaths per 100,000 population in 1970 to 0.002/100,000 in 1978, the last year for which mortality information is available (*3*). From 1971 through 1981, 431 (52%) of the 829 reported noncutaneous diphtheria cases occurred among persons < 15 years of age.

The clinical manifestations of diphtheria depend on the anatomic location of infection, the virulence and toxigenicity of the infecting strain, and the host's immunity to diphtheria toxin. In the usual pharyngeal form of diphtheria, an adherent grayish-white membrane covers, to some degree, the pharyngeal and/or tonsillar areas (*4*). Infrequently, as in this case, diphtheria may present as a necrotic tonsillitis. Common complications fall into two groups: 1) the membrane and associated tissue swelling, which may cause airway obstruction; and 2) the bacterial toxin, which may cause myocarditis or neuropathy. Mortality occurs predominantly among noncutaneous cases, which accounted for 59 (95%) of the 62 reported diphtheria deaths from 1971 through 1981. Twenty-seven (46%) of the deaths among persons with noncutaneous diphtheria occurred among persons < 15 years of age.

Diphtheria is acquired primarily by contact with the infected respiratory droplets or nasopharyngeal secretions of another patient or a carrier. Infectious skin exudate is involved in spread from cutaneous diphtheria. Disease occurs most frequently and more severely among unimmunized or partially immunized persons. Carrier status may occur among both immunized and unimmunized persons. The absence of any isolates of *C. diphtheriae* among the numerous contacts cultured in this investigation may be, in part, a result of delay in diagnosing the case and, therefore, delay in obtaining cultures.

Persons with suspected or proven diphtheria should receive diphtheria antitoxin and parenteral penicillin as soon as possible. Since diphtheria infection may not confer immunity, active immunization should be initiated or completed during convalescence. All household and other close contacts of respiratory diphtheria patients should be cultured and should receive an injection of an appropriate diphtheria-toxoid preparation and should be placed under active surveillance for 7 days for evidence of disease. Unimmunized or inadequately immunized close contacts and other close contacts whose cultures are positive should receive either intramuscular benzathine penicillin or 7 days of oral erythromycin, as well as toxoid. Culture specimens should be obtained before the initiation of antibiotics and, in the instance of a toxigenic *C. diphtheria*-positive culture, following completion of the antibiotic course (*5,6*). All close contacts should complete immunization with diphtheria toxoid.

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Fatal Diphtheria – Continued

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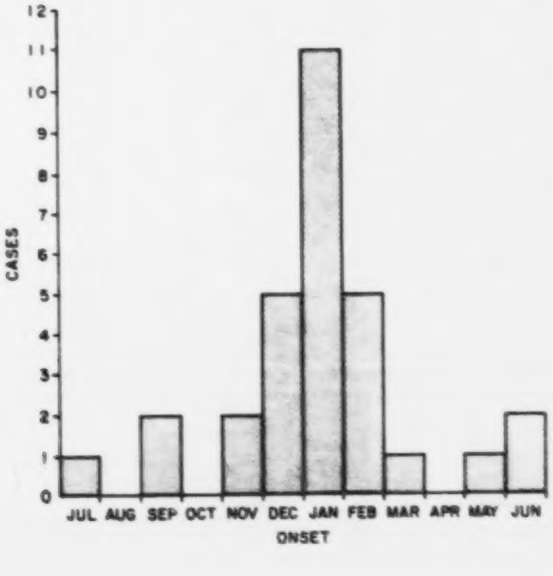
Current Trends

Epidemic Typhus Associated with Flying Squirrels — United States

Since 1976, 30 cases of illness caused by *Rickettsia prowazekii*, the causative organism of epidemic typhus, have been documented serologically among residents of the United States (*1-3*). These cases have been unusual in that, unlike classic louse-borne epidemic typhus, they have occurred sporadically, primarily in rural or suburban areas of the eastern United States. Ten of the 30 cases have occurred in Georgia, four in Virginia, three in North Carolina, two in Pennsylvania, two in Indiana, and one each in California, Illinois, Maryland, Massachusetts, Ohio, New Jersey, New York, Tennessee, and West Virginia. Twenty-one of the 30 cases have occurred during the coldest months of the year—December, January, and February (Figure 1).

FIGURE 1. Cases of *Rickettsia prowazekii* **infection by month of onset – United States, 1976-1982**



Typhus – Continued

Of the 30 patients with sporadic *R. prowazekii* infection, 73% have been ≥ 20 years of age and 50% have been male. Clinically, patients have presented with fever (100%), headache (81%), skin rash (66%), confusion (44%), and myalgia (42%). The skin rash has been characterized as maculopapular, usually involving the trunk and spreading to the extremities. Seventy-six percent of patients have received therapy with tetracycline or chloramphenicol; recovery has been much more rapid among these patients than among those not receiving appropriate antibiotics. However, no patient with sporadic *R. prowazekii* infection, regardless of antibiotic therapy, has died.

In 10 of 18 cases of sporadic *R. prowazekii* infection for which information has been available, flying squirrels, or nests consistent with those observed for flying squirrels, have been found in a home or building frequented by the patient. In one report, the southern flying squirrel, *Glaucomys volans*, was readily trapped in the environs of the patient in six of seven cases (*2*). This rodent inhabits the eastern United States, frequently nests in the attics of houses during the winter, and is a known host of *R. prowazekii* (*4*). It is presumed that infection is acquired from this animal, although the mechanism of transmission is unknown. One case of typhus occurred in California, where *G. volans* is absent. *Glaucomys sabrinus*, a close relative of *G. volans*, is present in California, but serologic studies of this species for antibody to *R. prowazekii* have been initiated only recently.

(Continued on page 561)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		41st Week Ending			Cumulative, First 41 Weeks		
		October 16, 1982	October 17, 1981	Median 1977-1981	October 16, 1982	October 17, 1981	Median 1977-1981
Aseptic meningitis		292	308	243	6,578	7,518	5,735
Brucellosis		5	5	3	127	130	139
Encephalitis:	Primary (arthropod-borne & unspec.)	56	54	54	1,045	1,167	914
	Post-infectious	1	-	4	49	74	171
Gonorrhea:	Civilian	18,829	20,020	20,020	750,233	792,386	789,267
	Military	249	460	455	21,016	22,339	21,796
Hepatitis:	Type A	457	458	612	17,525	19,682	22,821
	Type B	364	384	309	16,518	15,950	12,992
	Non A, Non B	48	N	N	1,759	N	N
	Unspecified	148	181	181	7,123	8,541	8,056
Legionellosis		8	N	N	414	N	N
Leprosy		2	2	2	150	208	137
Malaria		10	21	21	816	1,142	692
Measles (rubeola)		36	21	64	1,384	2,695	13,021
Meningococcal infections:	Total	43	53	45	2,331	2,818	2,123
	Civilian	43	53	45	2,318	2,807	2,105
	Military	-	-	-	13	11	16
Mumps		49	42	126	4,383	3,494	11,568
Pertussis		40	27	43	1,209	988	1,364
Rubella (German measles)		6	5	38	2,063	1,831	10,873
Syphilis (Primary & Secondary):	Civilian	612	642	497	25,754	24,150	19,403
	Military	9	20	3	347	309	244
Tuberculosis		484	486	486	20,137	21,179	21,677
Tularemia		8	3	4	205	221	165
Typhoid fever		8	22	13	313	458	403
Typhus fever, tick-borne (RMSF)		13	16	16	917	1,119	1,047
Rabies, animal		125	113	108	4,995	6,013	4,060

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	4
Botulism (Del. 1)	60	Paralytic	4
Cholera	-	Psittacosis (Upst. NY 1, Wash. 1, Calif. 1)	98
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (Va. 1)	65
Leptospirosis (Fla. 1, Oreg. 1, Hawaii 2)	50	Trichinosis	74
Plague	17	Typhus fever, flea-borne (endemic, murine)	33

TABLE III. Cases of specified notifiable diseases, United States, weeks ending October 16, 1982 and October 17, 1981 (41st week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	292	127	1,045	49	750,233	792,386	457	364	48	148	8	150
NEW ENGLAND	17	3	39	5	18,197	19,462	8	13	3	15	1	1
Maine	-	-	-	-	829	1,021	1	-	-	-	-	-
N.H.	2	-	7	-	530	698	1	1	1	3	1	-
Vt.	-	-	-	-	343	338	-	-	1	-	-	-
Mass.	3	-	14	-	8,258	8,201	-	7	-	9	-	-
R.I.	5	-	-	1	1,205	1,154	4	2	-	-	-	-
Conn.	7	3	18	4	6,832	8,042	2	3	1	3	-	1
MID. ATLANTIC	25	3	107	11	94,856	95,558	68	60	4	11	-	9
Upstate N.Y.	10	3	41	3	15,834	16,190	19	19	1	5	-	1
N.Y. City	2	-	17	-	38,792	39,640	9	5	-	-	-	6
N.J.	8	-	20	-	17,496	17,896	8	12	3	4	-	1
Pa.	5	-	29	8	22,934	21,832	32	24	-	2	-	1
E.N. CENTRAL	51	3	241	10	102,898	118,320	61	63	3	10	3	3
Ohio	20	1	98	4	29,280	37,383	26	16	2	4	-	-
Ind.	9	-	68	3	12,756	10,215	14	20	-	5	-	-
Ill.	1	1	12	1	25,085	33,915	5	6	1	-	-	3
Mich.	21	1	58	-	25,919	25,951	16	21	-	1	3	-
Wis.	-	-	5	2	9,868	10,876	-	-	-	-	-	-
W.N. CENTRAL	18	15	78	4	35,492	37,562	13	10	3	9	1	4
Minn.	2	1	27	1	5,194	5,723	5	1	2	-	-	2
Iowa	4	4	37	1	3,706	4,071	1	-	1	1	-	-
Mo.	4	4	6	-	16,862	17,558	6	4	-	8	-	1
N. Dak.	-	-	-	-	471	476	-	-	-	-	-	-
S. Dak.	-	1	-	1	957	1,035	-	1	-	-	-	1
Nebr.	5	2	4	-	2,136	2,797	-	2	-	-	1	-
Kans.	3	3	4	1	6,166	5,902	1	2	-	-	-	-
S. ATLANTIC	53	24	162	8	196,693	196,147	54	68	12	22	-	9
Del.	-	-	-	-	3,261	3,129	-	-	-	2	-	-
Md.	7	-	20	-	26,029	22,949	4	14	3	6	-	3
D.C.	-	-	-	-	11,784	11,041	2	2	-	-	-	-
Va.	11	7	30	1	16,772	17,839	9	10	4	2	-	1
W. Va.	3	-	15	-	2,249	2,986	3	3	-	-	-	-
N.C.	6	-	23	1	31,382	30,181	1	5	-	3	-	-
S.C.	4	2	2	-	19,300	18,916	21	13	2	3	-	-
Ga.	-	3	14	-	36,994	40,477	-	-	-	-	-	1
Fla.	22	12	58	6	50,952	47,650	14	21	3	6	-	4
E.S. CENTRAL	29	11	57	2	65,392	66,090	14	26	2	1	1	-
Ky.	-	-	1	-	8,834	8,155	2	3	-	-	-	-
Tenn.	2	6	26	-	25,884	24,944	6	14	2	1	-	-
Ala.	23	4	16	2	18,977	20,119	1	3	-	-	1	-
Miss.	4	1	14	-	11,697	12,872	5	6	-	-	-	-
W.S. CENTRAL	39	39	176	1	104,573	104,433	110	40	3	49	1	26
Ark.	-	7	16	-	8,606	7,957	-	1	2	6	1	-
La.	5	8	22	-	19,520	18,228	12	9	-	3	-	-
Okla.	11	5	34	-	11,430	11,294	41	6	1	4	-	-
Tex.	23	19	104	1	65,017	66,954	57	24	-	36	-	26
MOUNTAIN	13	-	35	3	28,607	31,016	25	14	2	11	1	2
Mont.	-	-	-	-	1,074	1,144	-	1	-	-	-	-
Idaho	3	-	-	-	1,217	1,389	-	-	-	-	-	1
Wyo.	-	-	-	-	748	770	3	-	-	1	-	-
Colo.	5	-	17	1	6,900	8,350	11	1	1	-	-	-
N. Mex.	-	-	1	-	3,433	3,401	6	1	1	2	-	-
Ariz.	-	-	8	-	6,738	9,157	3	-	-	4	-	-
Utah	1	-	5	2	1,250	1,549	2	2	-	1	1	1
Nev.	4	-	4	-	4,247	5,256	1	9	-	3	-	-
PACIFIC	47	29	150	5	106,725	124,808	104	70	16	20	-	97
Wash.	7	1	11	-	8,983	10,433	11	10	1	2	-	6
Oreg.	2	-	3	-	6,336	7,466	12	2	1	1	-	1
Calif.	33	27	127	5	88,713	101,232	81	58	13	17	-	69
Alaska	2	1	5	-	2,696	3,209	-	-	-	-	-	1
Hawaii	3	-	4	-	1,999	2,469	-	-	1	-	-	21
Guam	U	-	-	-	97	92	U	U	U	U	U	-
P.R.	2	-	1	1	2,152	2,550	-	9	-	3	-	1
V.I.	U	-	-	-	161	189	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	297	364	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 16, 1982 and October 17, 1981 (41st week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	10	816	36	1,384	2,696	43	2,331	49	4,363	40	6	2,063	1,831
NEW ENGLAND	1	42	-	15	83	4	122	1	181	-	-	20	119
Maine	-	-	-	-	5	-	9	-	41	-	-	-	33
N.H.	-	1	-	3	6	-	15	-	15	-	-	10	51
Vt.	-	-	-	2	3	-	6	-	7	-	-	-	-
Mass.	-	24	-	4	59	-	30	1	86	-	-	5	23
R.I.	-	3	-	-	-	1	14	-	15	-	-	1	-
Conn.	1	14	-	6	10	3	48	-	17	-	-	4	12
MID. ATLANTIC	2	136	-	162	843	13	420	4	281	11	1	102	217
Upstate N.Y.	-	25	-	112	209	3	146	2	68	3	-	49	103
N.Y. City	1	53	-	42	87	4	81	1	47	1	1	34	54
N.J.	-	29	-	4	58	4	85	-	41	-	-	18	47
Pa.	1	29	-	4	489	2	108	1	125	7	-	1	13
E.N. CENTRAL	-	58	-	76	81	6	286	15	2,222	11	1	179	383
Ohio	-	12	-	1	16	3	101	1	1,577	-	-	-	3
Ind.	-	3	-	2	9	1	29	-	37	-	-	28	132
Ill.	-	13	-	23	23	-	73	1	182	11	-	66	96
Mich.	-	26	-	50	30	2	66	6	314	-	-	49	34
Wis.	-	4	-	-	3	-	17	7	112	-	1	36	118
W.N. CENTRAL	1	20	-	49	10	4	106	5	576	1	-	59	78
Minn.	-	2	-	-	3	-	27	2	439	-	-	5	7
Iowa	1	7	-	-	1	-	9	2	34	-	-	-	4
Mo.	-	5	-	2	1	3	29	-	17	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	-	1	-
Nebr.	-	3	-	3	4	1	13	-	-	-	-	-	1
Kans.	-	2	-	44	1	-	18	1	86	1	-	15	64
S. ATLANTIC	4	118	2	44	439	7	491	3	265	6	-	80	135
Del.	-	4	-	-	-	-	-	-	13	-	-	1	1
Md.	-	19	-	3	5	-	34	-	29	-	-	34	1
D.C.	-	4	-	1	1	1	3	-	-	-	-	-	-
Va.	4	39	-	14	9	2	69	1	36	1	-	13	6
W. Va.	-	7	-	3	9	-	9	2	93	-	-	1	22
N.C.	-	3	1	1	3	2	87	-	16	5	-	1	5
S.C.	-	4	-	-	2	1	55	-	18	-	-	1	8
Ga.	-	15	-	-	111	-	100	-	15	-	-	13	37
Fla.	-	23	1	22	299	1	134	-	48	-	-	16	55
E.S. CENTRAL	-	8	-	7	5	1	146	2	52	1	-	46	35
Ky.	-	5	-	1	1	-	24	1	18	-	-	28	21
Tenn.	-	-	-	6	2	-	63	-	19	-	-	2	13
Ala.	-	-	-	-	2	1	48	1	9	-	-	-	1
Miss.	-	3	-	-	-	-	11	-	6	1	-	16	-
W.S. CENTRAL	-	58	26	134	856	2	280	5	193	-	-	106	163
Ark.	-	4	-	-	20	-	13	-	7	-	-	1	3
La.	-	4	-	2	4	1	59	-	6	-	-	1	9
Okla.	-	8	3	30	5	1	28	-	-	-	-	3	1
Tex.	-	42	23	102	827	-	180	5	180	-	-	101	150
MOUNTAIN	-	27	-	19	36	1	103	3	92	1	-	78	92
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	11
Colo.	-	11	-	6	10	1	43	-	16	-	-	6	30
N. Mex.	-	3	-	-	9	-	15	-	-	1	-	6	5
Ariz.	-	7	-	12	5	-	18	3	41	-	-	14	20
Utah	-	3	-	-	-	-	9	-	20	-	-	22	8
Nev.	-	-	-	-	10	-	2	-	6	-	-	12	11
PACIFIC	2	349	8	878	343	5	377	11	501	9	4	1,393	609
Wash.	1	20	1	41	3	1	43	-	64	5	-	38	89
Oreg.	-	13	4	23	5	2	71	-	-	-	-	6	53
Calif.	1	311	3	808	328	2	248	6	412	4	4	1,336	451
Alaska	-	1	-	1	-	-	11	1	10	-	-	5	1
Hawaii	-	4	-	5	7	-	4	4	15	-	-	8	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	2	125	283	-	8	-	78	-	-	11	4
V.I.	U	-	U	-	24	U	-	U	3	U	U	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 16, 1982 and October 17, 1981 (41st week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	25,754	24,150	484	20,137	205	6	313	13	917	4,995
NEW ENGLAND	459	463	22	557	6	-	17	1	10	39
Maine	4	5	1	47	-	-	-	-	-	26
N.H.	1	12	-	20	-	-	-	-	1	1
Vt.	2	15	-	13	-	-	2	-	-	1
Mass.	305	297	13	352	6	-	13	-	5	6
R.I.	19	26	-	24	-	-	-	-	2	-
Conn.	128	108	8	101	-	-	2	1	2	5
MID. ATLANTIC	3,484	3,508	77	3,357	7	2	57	2	39	174
Upstate N.Y.	337	327	24	692	7	2	9	1	13	92
N.Y. City	2,092	2,097	35	1,271	-	-	29	1	2	-
N.J.	489	502	5	848	-	-	11	-	13	17
Pa.	566	582	13	546	-	-	8	-	11	65
E.N. CENTRAL	1,415	1,802	73	3,061	1	2	26	1	81	520
Ohio	248	232	14	513	-	1	12	1	76	72
Ind.	157	237	2	381	-	1	2	-	-	70
Ill.	696	960	42	1,316	-	-	3	-	5	263
Mich.	239	297	11	690	-	-	8	-	-	6
Wis.	75	76	4	161	1	-	1	-	-	109
W.N. CENTRAL	442	528	12	583	31	-	14	1	33	1,038
Minn.	102	164	-	104	-	-	6	-	-	180
Iowa	24	21	2	59	2	-	1	-	4	329
Mo.	256	296	7	282	21	-	4	1	11	103
N. Dak.	7	8	-	12	-	-	-	-	-	86
S. Dak.	2	2	-	26	1	-	-	-	4	88
Nebr.	11	9	1	24	3	-	2	-	2	114
Kans.	40	28	2	76	4	-	1	-	12	138
S. ATLANTIC	7,084	6,436	79	4,144	12	-	40	5	497	942
Del.	19	13	-	38	-	-	-	-	-	2
Md.	383	475	-	459	1	-	9	-	48	53
D.C.	376	526	3	164	-	-	-	-	-	-
Va.	483	558	10	450	4	-	4	1	73	503
W. Va.	25	18	3	129	-	-	4	-	8	37
N.C.	572	509	13	667	-	-	2	3	211	63
S.C.	434	444	9	395	6	-	3	1	105	53
Ga.	1,465	1,596	15	653	-	-	-	-	47	170
Fla.	3,327	2,297	26	1,189	1	-	18	-	5	61
E.S. CENTRAL	1,798	1,579	60	1,856	8	-	17	1	86	566
Ky.	106	87	12	487	-	-	2	-	1	115
Tenn.	515	572	25	602	6	-	3	1	53	314
Ala.	667	461	9	501	-	-	9	-	14	130
Miss.	510	459	14	266	2	-	3	-	18	7
W.S. CENTRAL	6,737	5,792	74	2,479	105	2	32	1	153	953
Ark.	163	126	10	284	63	2	5	1	27	130
La.	1,493	1,322	12	366	3	-	3	-	2	31
Okla.	143	130	6	279	30	-	3	-	71	166
Tex.	4,938	4,214	46	1,550	9	-	21	-	53	626
MOUNTAIN	642	597	17	562	26	-	13	1	12	255
Mont.	5	11	2	37	3	-	-	-	4	84
Idaho	24	17	2	28	1	-	-	1	3	10
Wyo.	16	10	4	6	5	-	-	-	1	21
Colo.	174	178	-	68	4	-	3	-	1	47
N. Mex.	149	105	-	98	2	-	-	-	1	23
Ariz.	162	150	5	231	-	-	7	-	-	49
Utah	19	23	-	38	11	-	2	-	-	17
Nev.	93	103	4	59	-	-	1	-	2	4
PACIFIC	3,693	3,445	70	3,538	9	-	97	-	6	508
Wash.	128	144	3	223	1	-	6	-	-	7
Oreg.	90	86	10	142	1	-	4	-	1	3
Calif.	3,374	3,148	56	2,879	6	-	83	-	5	419
Alaska	14	11	-	74	1	-	1	-	-	79
Hawaii	87	56	1	220	-	-	3	-	-	-
Guam	1	-	U	38	-	U	-	U	-	-
P.R.	547	529	2	341	-	-	2	-	-	43
V.I.	21	18	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending October 16, 1982 (41st week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	585	393	131	29	20	12	32
Boston, Mass.	153	92	44	7	6	4	17
Bridgeport, Conn.	41	23	9	3	4	2	2
Cambridge, Mass.	8	6	1	1	-	-	1
Fall River, Mass.	30	26	3	1	-	-	-
Hartford, Conn.	57	38	13	1	3	2	1
Lowell, Mass.	23	16	4	3	-	-	1
Lynn, Mass.	17	10	7	-	-	-	1
New Bedford, Mass.	31	19	9	-	1	2	-
New Haven, Conn.	39	24	11	2	2	-	-
Providence, R.I.	59	47	8	3	1	-	2
Somerville, Mass.	8	6	2	-	-	-	1
Springfield, Mass.	34	24	4	3	1	2	4
Waterbury, Conn.	26	20	4	2	-	-	-
Worcester, Mass.	59	42	12	3	2	-	2
MID. ATLANTIC	2,612	1,734	590	162	79	47	102
Albany, N.Y.	55	39	12	-	1	3	1
Allentown, Pa.	20	15	5	-	-	-	-
Buffalo, N.Y.	126	86	31	3	5	1	11
Camden, N.J.	31	18	11	1	1	-	-
Elizabeth, N.J.	19	14	4	-	-	1	1
Erie, Pa.†	33	15	13	2	3	-	2
Jersey City, N.J.	49	31	14	3	-	1	-
N.Y. City, N.Y.	1,342	894	287	96	41	24	35
Newark, N.J.	62	24	21	8	6	3	6
Paterson, N.J.	24	19	-	3	2	-	1
Philadelphia, Pa.†	398	255	98	27	8	10	27
Pittsburgh, Pa.†	104	60	31	9	3	1	4
Reading, Pa.	26	22	3	-	1	-	2
Rochester, N.Y.	126	100	20	4	2	-	4
Schenectady, N.Y.	22	15	5	-	2	-	1
Scranton, Pa.†	29	20	5	4	-	-	-
Syracuse, N.Y.	78	59	15	-	1	3	4
Trenton, N.J.	21	15	4	1	1	-	-
Utica, N.Y.	16	10	4	-	2	-	1
Yonkers, N.Y.	31	23	7	1	-	-	2
E.N. CENTRAL	2,123	1,363	480	138	66	76	68
Akron, Ohio	39	25	4	2	2	6	-
Canton, Ohio	42	26	9	6	-	1	1
Chicago, Ill.	526	314	139	41	13	19	12
Cincinnati, Ohio	129	80	31	8	8	2	18
Cleveland, Ohio	152	99	37	7	4	5	2
Columbus, Ohio	140	81	31	14	11	3	4
Dayton, Ohio	91	54	24	4	7	2	2
Detroit, Mich.	237	143	51	23	4	16	9
Evansville, Ind.	57	41	14	1	-	1	3
Fort Wayne, Ind.	49	37	7	1	1	3	2
Gary, Ind.	15	9	4	2	-	-	-
Grand Rapids, Mich.	52	45	5	-	1	1	-
Indianapolis, Ind.	137	91	34	3	2	7	2
Madison, Wis.	33	21	10	-	1	1	3
Milwaukee, Wis.	149	103	28	6	8	4	2
Peoria, Ill.	34	20	7	5	1	1	1
Rockford, Ill.	48	37	10	1	-	-	2
South Bend, Ind.	33	25	6	1	-	1	2
Toledo, Ohio	109	76	21	9	1	2	2
Youngstown, Ohio	51	36	8	4	2	1	1
W.N. CENTRAL	722	474	149	33	31	35	38
Des Moines, Iowa	61	42	11	2	2	4	7
Duluth, Minn.	27	22	3	1	1	-	3
Kansas City, Kans.	43	30	9	2	2	-	2
Kansas City, Mo.	131	85	35	5	4	2	9
Lincoln, Nebr.	22	11	7	2	1	1	1
Minneapolis, Minn.	83	52	17	5	4	5	4
Omaha, Nebr.	80	56	11	1	5	7	4
St. Louis, Mo.	152	90	38	9	6	9	-
St. Paul, Minn.	67	51	9	1	4	2	1
Wichita, Kans.	56	35	9	5	2	5	7
S. ATLANTIC	1,052	679	233	61	29	48	31
Atlanta, Ga.	144	84	34	11	5	10	3
Baltimore, Md.	174	105	47	8	10	4	5
Charlotte, N.C.	67	36	17	9	1	4	1
Jacksonville, Fla.	89	53	23	7	3	3	-
Miami, Fla.	123	70	37	12	2	2	2
Norfolk, Va.	45	27	9	3	2	4	4
Richmond, Va.	78	38	23	5	2	10	4
Savannah, Ga.	26	20	4	1	-	1	4
St. Petersburg, Fla.	94	78	13	1	2	-	1
Tampa, Fla.	68	46	15	1	-	6	5
Washington, D.C.§	109	97	1	3	2	4	2
Wilmington, Del.	35	25	10	-	-	-	-
E.S. CENTRAL	562	363	141	21	13	24	16
Birmingham, Ala.	106	70	25	3	3	5	1
Chattanooga, Tenn.	59	37	13	4	1	4	7
Knoxville, Tenn.	37	25	12	-	-	-	-
Louisville, Ky.	83	54	20	4	1	4	4
Memphis, Tenn.	109	79	23	3	3	1	2
Mobile, Ala.	44	26	13	2	2	1	2
Montgomery, Ala.	29	17	9	-	-	3	-
Nashville, Tenn.	95	55	26	5	3	6	-
W.S. CENTRAL	1,258	714	308	106	65	65	40
Austin, Tex.	54	38	9	4	2	1	1
Baton Rouge, La.	51	31	10	2	5	3	3
Corpus Christi, Tex.	44	28	10	3	2	1	-
Dallas, Tex.	178	96	43	15	13	11	2
El Paso, Tex.	53	31	9	5	-	8	2
Fort Worth, Tex.	87	48	18	6	3	12	3
Houston, Tex.	287	132	87	39	16	13	10
Little Rock, Ark.	87	53	25	6	1	2	5
New Orleans, La.	134	74	35	13	8	4	-
San Antonio, Tex.	140	85	38	7	6	4	10
Shreveport, La.	59	42	12	2	-	3	-
Tulsa, Okla.	84	56	14	4	7	3	4
MOUNTAIN	602	371	131	49	28	23	34
Albuquerque, N.Mex.	108	56	31	12	8	1	4
Colo. Springs, Colo.	38	24	8	5	1	-	9
Denver, Colo.	131	88	25	9	4	5	6
Las Vegas, Nev.	56	30	12	11	1	2	1
Ogden, Utah	11	7	4	-	-	-	1
Phoenix, Ariz.	102	64	20	3	9	6	1
Pueblo, Colo.	18	14	1	3	-	-	2
Salt Lake City, Utah	44	27	9	1	-	7	3
Tucson, Ariz.	94	61	21	5	5	2	7
PACIFIC	1,457	947	304	100	41	64	69
Berkeley, Calif.	16	15	-	-	-	1	-
Fresno, Calif.	73	45	19	2	1	6	2
Glendale, Calif.	9	9	-	-	-	-	-
Honolulu, Hawaii	51	28	14	3	2	4	3
Long Beach, Calif.	76	51	14	4	2	5	3
Los Angeles, Calif.	284	180	53	29	9	13	10
Oakland, Calif.	81	52	20	4	3	2	4
Pasadena, Calif.	25	20	3	-	-	2	1
Portland, Oreg.	100	68	11	8	5	8	3
Sacramento, Calif.	63	41	12	4	1	5	3
San Diego, Calif.	136	103	20	7	4	2	12
San Francisco, Calif.	155	94	37	13	5	6	4
San Jose, Calif.	161	90	48	12	4	7	13
Seattle, Wash.	128	87	27	10	2	2	4
Spokane, Wash.	57	33	18	2	2	2	6
Tacoma, Wash.	42	31	8	2	1	-	1
TOTAL	10,973††	7,038	2,467	699	372	394	430

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Typhus – Continued

It has long been assumed that the causative agent of epidemic typhus existed only in the man-louse-man cycle, and that patients who had recovered from typhus constituted the reservoir of *R. prowazekii* in inter-epidemic periods (rickettsemia develops in Brill-Zinsser disease, the recrudescent form of *R. prowazekii* infection). Under this assumption, eradication of epidemic typhus on a global scale would be theoretically possible, since few patients with Brill-Zinsser disease would be alive after long inter-epidemic periods. The finding of sporadic *R. prowazekii* infecton and the existence of a sylvan reservoir of this rickettsial agent, therefore, have important implications concerning the perpetuation of epidemic typhus in humans. Since none of the patients with sporadic epidemic typhus have been infested with body lice, the possibility that sporadically acquired infection can precipitate outbreaks of epidemic typhus remains unexplored. Whether flying squirrels and/or other mammalian hosts were infected with *R. prowazekii* before the evolution of epidemic typhus in humans, or whether the reverse is true, is also unknown.

Since the causative organism has yet to be isolated from a human with sporadic *R. prowazekii* infection and since the mechanism of transmission of this disease has not been elucidated, CDC is attempting to identify as many cases of this disease as possible. Therefore, physicians who encounter patients with a rickettsial-like illness (fever, headache, myalgia, and skin rash) during the colder months are encouraged to report these cases to CDC through their local and state health departments.

Reported by Div of Viral Diseases, Center for Infectious Diseases, CDC.

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2. Duma RJ, Sonenshine DE, Bozeman FM, et al. Epidemic typhus in the United States associated with flying squirrels. JAMA 1981;245:2318-23.
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International Notes

Prevention of Blindness: Trachoma Control

Trachoma is estimated to affect approximately 500 million people, primarily in rural communities of the developing world and in the arid areas of tropical and subtropical zones. Approximately 6-9 million* people are blind from trachoma, and many more have suffered partial loss of vision.

Trachoma can be controlled, and blindness and visual loss can be prevented by appropriate application of relatively simple and inexpensive measures. Therefore, communities with uncontrolled trachoma should be identified so that appropriate control measures can be implemented. Such communities are likely to be found in countries where blindness rates are above the range of 0.5%-1%, and where more than 1%-2% of the population are blind from all causes.

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*Estimate endorsed by the WHO Programme Advisory Group on the Prevention of Blindness in February 1982.

Blindness – Continued

In recent years, preventable and easily curable blindness has been recognized as a combatible public health problem. The need for blindness prevention has led to a renewed interest in trachoma and associated infections, which are still the most important causes of preventable blindness in the world.

In 1975, the Twenty-Eighth World Health Assembly, in a resolution on the prevention of blindness, requested the Director General of the World Health Organization "to encourage member countries to develop national programmes for the prevention of blindness, especially aimed at the control of trachoma, xerophthalmia, onchocerciasis, and other causes, and to introduce adequate measures for the early detection and treatment for other potentially blinding conditions such as cataract and glaucoma."

Trachoma-control programs must be aimed primarily at those severely affected communities where the disease leads to blindness. In planning and implementing control programs, consideration must be given to the simultaneous introduction of other specific measures for dealing with all causes of avoidable blindness. In recent years, knowledge about the causative agent of trachoma and about the epidemiologic patterns that determine the intensity of inflammation and the gravity of disease has increased substantially. This new information has led to a clearer definition of risk for the individual and for the community and has made it possible to distinguish communities with "blinding trachoma" from those with "non-blinding trachoma." In view of these developments and the importance of trachoma control in the prevention of blindness, a revised guide to trachoma control has been prepared (*1*).

This new field guide presents simple and effective methods suitable for widespread implementation in underserved communities with blinding trachoma. It stresses the importance of maximum participation of the people themselves in promotion of health care for the prevention and cure of blinding trachoma. This approach makes the best possible use of available but limited resources and is in accord with the defined health objectives and reorientation of health activities found in the Declaration of Alma-Ata on Primary Health Care.

The guide also outlines basic principles for the organization of trachoma-control programs. It summarizes present knowledge on the epidemiologic and clinical aspects of the disease, explains the most commonly used approach of large-scale trachoma treatment through control of infection transmission, and describes the more intensive treatment of individual cases. It also contains recommendations on training activities, health education, evaluation of results, and monitoring of programs. The basic methods described can be suitably adapted to local conditions and should allow the swift and effective implementation of trachoma-control programs.

Reported by WHO Weekly Epidemiological Record 1982;57:189-90.

Reference

1. World Health Organization. Guide to trachoma control. Geneva: World Health Organization 1981.

Epidemiologic Notes and Reports

Outbreak of *Yersinia enterocolitica* — Washington State

In December 1981 and January 1982, an outbreak of predominantly gastroenteritis caused by *Yersinia enterocolitica* occurred among 87 persons in Washington state. The illness was associated with the ingestion of a locally produced brand of tofu, an oriental soybean curd, *Yersinia enterocolitica – Continued*

packed in untreated spring water. It was sold primarily in western Washington with limited distribution in Alaska, Idaho, and Oregon. *Y. enterocolitica* was isolated from the tofu, the processing plant's water supply, and several sites within the plant.

In mid-January 1982, the Seattle-King County Health Department received reports from two hospital laboratories of 12 positive stool cultures of *Y. enterocolitica* associated with gastrointestinal illness; during the previous year, 10 *Y. enterocolitica* isolates were reported in the entire county. Increased surveillance by Seattle-King County and the Washington State Department of Social and Health Services over several months identified additional cases, for a total of 87. A case was defined as anyone who was culture-positive and/or who had had contact with a case and had fever in conjunction with diarrhea or abdominal cramps.

Of the 87 cases, 56 were culture-positive; 38 patients had enteritis, six had only extra-intestinal infections, four had both extra-intestinal infections and enteritis, and eight were asymptomatic carriers. The 10 cases of extra-intestinal infection included patients with wound ulcers (two), inguinal lymphadenopathy (two, one with a perineal ulcer), pneumonia (two), labial infection (one), arthritis (one), septicemia (one), and pharyngitis (one). Nine (16.1%) of the 56 culture-positive patients were < 1 year of age, 12 (21.4%) were 1 to 4 years old, 7 (12.5%) were 5 to 18 years old, and 28 (50.0%) were > 18 years old. Among 38 culture-positive cases with enteritis, who tended to have more severe illness and on whom more complete information was available, the following were reported: fever (91%), abdominal pain (81%), diarrhea (76%), nausea (54%), vomiting (39%), bloody stools (27%), joint pain (42%), and skin rash (43%). Symptoms lasted from 1 day to 4 weeks (mean 10 days). Two patients, however, were ill for over 2 months. Seventeen patients were hospitalized for from 2 to 11 days (average 9.7 days); two of those hospitalized had appendectomies and one, a partial colectomy. One patient was also culture-positive for *Salmonella typhimurium* and one for rotavirus, as well as for *Y. enterocolitica.*

A neighborhood case-control study of 11 ill persons and 11 controls revealed an association between *Y. enterocolitica* infection and tofu consumption ($p < 0.01$). Questions regarding animal contacts, water sources, raw milk consumption, travel, and day-care settings, as well as extensive food histories, did not identify any other common sources. Further investigation revealed that 70 (80.5%) of the 87 persons interviewed had consumed the same brand of tofu within the 2 weeks before onset of symptoms. For five culture-positive persons who had consumed only one meal of tofu, the incubation period averaged 6.6 days (range 4-11 days).

The tofu plant in King County is located on a rural island in Puget Sound. The plant water supply, which originates from a spring approximately 0.5 mile from the plant, is shared by four residences and an apple-cider plant. No illness was reported among consumers of the cider. Inspection of the tofu plant on January 20, 1982, disclosed unsanitary conditions, including poor personal hygiene, use of an outdoor privy, and unsanitary equipment. Samples of tofu and the plant water supply were positive for *Y. enterocolitica*, as were stool specimens collected from two of 12 employees; both employees were asymptomatic.

A voluntary recall of the product was instituted from January 21 to January 25. Further sam-

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The *Morbidity and Mortality Weekly Report* is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts on interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

Yersinia enterocolitica – Continued

pling and laboratory analysis of the tofu demonstrated high fecal-coliform counts. Production was resumed after a water-purification system was installed. Laboratory results of plasmid analysis, determination of enterotoxin production, and serotyping are pending.

Reported by C Nolan, MD, N Harris, DVM, Seattle-King County Health Dept, J Ballard, MS, J Allard, PhD, J Kobayashi, MD, State Epidemiologist, Washington State Dept of Social and Health Svcs.

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MORBIDITY AND MORTALITY WEEKLY REPORT

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[illegible] Rabies – United States, 1979-1982

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International Notes

Valproic Acid and Spina Bifida: A Preliminary Report — France

Valproic acid use during the first trimester of pregnancy has been reported among an unusually high proportion of mothers of infants with spina bifida. During 1976 and from 1978 through September 1982, the birth defects surveillance system at the Institut Europeen des Genomutations in Lyon, France, ascertained 146 cases of spina bifida aperta. Among these cases, nine (6.2%) of the mothers had epilepsy and had taken valproic acid during the first trimester at dosages between 400 mg and 2,000 mg per day. Five of the nine patients with spina bifida were exposed to valproic acid alone, and four were exposed to additional anticonvulsants. Twenty-one (0.32%) of the mothers of the 6,616 infants in the surveillance system with other malformations had taken the drug (Table 1). These data show a highly statistically significant odds ratio of 20.6.* To isolate the effect of valproic acid from the possible effects of seizure disorders and other drug therapy, the analysis was then confined to the 71 epileptic mothers. Nine (90%) of the 10 such mothers of spina bifida infants had taken valproic acid, compared with 21 (34.4%) of the 61 mothers of infants with other defects (Table 2). The odds ratio of 17.1 is statistically significant.

Reported by E Robert, MD, Institut Europeen des Genomutations, Lyon, France; Epidemiology Development Br, Div of Drug Experience, Food and Drug Administration; Birth Defects Br, Chronic Diseases Div, Center for Environmental Health, CDC.

Editorial Note: A woman who requires treatment for epilepsy during pregnancy is at increased risk of having a baby with a birth defect. The American Academy of Pediatrics Committee on Drugs offers the following recommendation on alerting women to the risk: "When a woman who has epilepsy and requires medication asks about pregnancy, she should be advised that she has a 90% chance of having a normal child, but that the risk of congenital malformations and mental retardation is two to three times greater than average because of her disease or its treatment" (*1*). The new data from Lyon do not change this general advice.

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*The odds ratio is an estimation of relative risk in case-control studies.

TABLE 1. Spina bifida (SB) and treatment with valproic acid (VA) of mothers who have delivered infants with birth defects — Lyon, France

	SB	Other birth defects	Total
VA treatment	9	21	30
No VA treatment	137	6,595	6,732
Total	146	6,616	6,762

odds ratio = 20.6; 95% confidence limits 8.2-47.9; $p < 0.000001$ (2-tail)

HE 20.7009:

Valproic Acid and Spina Bifida – Continued

While the Lyon data suggest that valproic acid taken during the first trimester of pregnancy is associated with spina bifida, other anticonvulsants (phenytoin and trimethadione) have also been associated with increased risk of specific congenital defects (*2,3*). Selection of therapy for a seizure patient who may become pregnant is a complex decision and requires careful consideration of the clinical situation. All anticonvulsants, including valproic acid, carry a warning of potential human teratogenicity in their labeling.

It has been estimated that, in the United States, 700-1,000 pregnant women take valproic acid each year. Given the United States' spina bifida rate of approximately six per 10,000 births (*4*) and a relative risk of 20.6 (as indicated by the French data), the estimated risk of valproic acid-exposed women having children with spina bifida is approximately 1.2%. This risk is similar to that for women who have had previous children with neural-tube defects (anencephaly or spina bifida). The United States has prenatal counseling centers for women at increased risk of having children with spina bifida. Women who may be exposed to valproic acid during pregnancy should contact their physicians for further counseling.

A registry of women currently taking valproic acid during pregnancy is being established in order to better define the risk of such therapy. Physicians of women who are taking valproic acid during pregnancy are urged to report to this registry as soon as possible by calling (404) 452-4080 on weekdays between 8:00 a.m. and 4:30 p.m., Eastern time, or by writing Birth Defects Branch, Center for Environmental Health, Centers for Disease Control, Atlanta, Georgia 30333.

References

1. American Academy of Pediatrics Committee on Drugs. Anticonvulsants and pregnancy. Pediatrics 1979;63:331-3.
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4. CDC. Congenital malformations surveillance, January-December 1980. Atlanta: CDC, February 1982:8.

TABLE 2. Spina bifida (SB) and treatment with valproic acid (VA) of mothers who have seizure disorders and who have delivered infants with birth defects — Lyon, France

	SB	Other Birth defects	Total
VA treatment	9	21	30
No VA treatment	1	40*	41
Total	10	61	71

odds ratio = 17.1; 95% confidence limits 2.1-769.5; p = 0.00068 (2-tail)

*Five not treated with anticonvulsants; five with unknown therapy

Current Trends

Rapid Laboratory Virus Diagnosis

A World Health Organization (WHO)/National Bacteriological Laboratory meeting was held in Stockholm, Sweden, from June 16 to June 18, 1982, to review rapid laboratory virus

Virus Diagnosis – Continued

diagnosis, with special emphasis on coordination of production, quality control, and supply of reagents. A summary of the meeting follows.*

Recent advances in rapid diagnostic techniques: Existing rapid diagnostic techniques and recent relevant advances pertaining to a number of viral infections were reviewed. The major advances in viral respiratory-disease diagnosis include the successful extension of immunofluorescence techniques to more laboratories, use of large-scale production of antibodies in eggs, and development of sensitive solid-phase immunoassays for detection of virus antigens in nasopharyngeal secretions. For diarrheal diseases, immunoassays for both rotaviruses and adenoviruses have been further refined and standardized, and monoclonal antibodies have been used in ELISA tests for rotavirus. In the hepatitis area, advances include growth of hepatitis A virus in tissue-culture systems, use of antigens for IgM immunoassays, the recent production of hepatitis B core antigen from bacteria through genetic engineering, and development of immunoassays for both antigen and antibody associated with the "delta" antigen. The diagnosis of dengue has been facilitated by development of monoclonal antibodies to all four dengue types. Detection of IgM antibodies during the acute phase of both dengue and Japanese encephalitis is of value in rapid diagnosis. Development of microscopic slides containing stable, inactivated, formalin-fixed antigens for Lassa and Ebola viruses has facilitated the detection of antibodies by immunofluorescence.

Reagents for quality control and distribution: Preparation of reagents can be commercial or WHO-sponsored, but working reagents supplied by WHO should consist of large lots suitable for quality control and wide distribution. Quality control must be carried out by at least two reference laboratories separate from the producer and must include not only serologic reagents but also the solid-phase supports and any other materials used in each assay system. Advances in biotechnology might change the availability and quality of reagents and the feasibility of production in the near future, but this eventuality should not delay the implementation of current plans.

General recommendations: The Group recommended that a coordinated program be developed to ensure the availability of reagents within the network of WHO Collaborating Centres and National Laboratories for the diagnosis of the following diseases: viral hepatitis; respiratory viral diseases, including measles; viral gastroenteritis; arthropod- and rodent-borne viral diseases; rubella; and herpes-virus-group diseases.

To implement a program in each of these areas, it was agreed that coordinators within the WHO Collaborating Centers, together with their associates, be appointed and assume responsibility for 1) identifying specific tests recommended for rapid diagnosis, taking into account considerations of cost, simplicity, and accuracy; 2) defining reagents and test material required and identifying specific suppliers of reagents; 3) defining minimum standards of quality and performance of reagents and other material; 4) developing a strategy for distributing reagents within the network of WHO Collaborating Centres for Reference and Research and cooperating national laboratories; 5) assisting WHO in developing and implementing training courses and selecting suitable candidates for training; 6) evaluating rapid virus diagnostic tests performed in field situations; and 7) soliciting and reviewing information on new tests and new reagents, including monoclonal antibodies that might have application in rapid virus diagnosis.

Reported by WHO Weekly Epidemiological Record *1982;57:257,261.*

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*A full report of the meeting may be obtained from the Virus Diseases Unit, Division of Communicable Diseases, World Health Organization, CH-1211, Geneva 27, Switzerland.

Rubella — United States, 1979-1982

A record low number of 2,077 rubella cases was reported in the United States for 1981. This was a 47% decline from the 1980 total of 3,904 cases (the previous record low) and an 82% decline from the 1979 total of 11,795 cases. During the first 38 weeks of 1982 (ending September 25), 2,018 cases were reported—a 13% increase from the number of cases reported during the same period in 1981 (Figure 1). This increase was due to a three-fold increase in reported cases from California from 445 cases during the first 38 weeks of 1981 to 1,319 cases during the same period in 1982. Reported cases of rubella from all other states declined by 52% during the first 38 weeks of 1982 as compared with the first 38 weeks of 1981.

The National Congenital Rubella Syndrome Registry (NCRSR) maintained at the Immunization Division, CDC, collects detailed data on clinical signs and laboratory test results on patients reported with congenital rubella syndrome (CRS). Reports of CRS are voluntarily submitted to CDC from local and state health departments. Specific criteria are used for classifying patient data submitted to the NCRSR (*1*).*

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*Confirmed cases are those with defects compatible with CRS, and with laboratory confirmation of disease. Compatible cases are those with defects compatible with CSR, but without laboratory confirmation.

(Continued on page 573)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	42nd Week Ending			Cumulative, First 42 Weeks		
	October 23, 1982	October 24, 1981	Median 1977-1981	October 23, 1982	October 24, 1981	Median 1977-1981
Aseptic meningitis	333	298	252	6,914	7,816	5,980
Brucellosis	2	7	6	129	137	143
Encephalitis: Primary (arthropod-borne & unspec.)	52	40	38	1,099	1,207	952
Post-infectious	-	5	5	48	79	173
Gonorrhea: Civilian	18,583	20,593	20,593	771,070	812,979	807,241
Military	422	378	485	21,438	22,717	22,390
Hepatitis: Type A	475	559	593	18,042	20,241	23,450
Type B	497	436	319	17,031	16,393	13,338
Non A, Non B	54	N	N	1,825	N	N
Unspecified	179	191	191	7,294	8,731	8,309
Legionellosis	6	N	N	420	N	N
Leprosy	8	2	2	158	210	146
Malaria	28	27	17	847	1,169	807
Measles (rubeola)	60	16	88	1,443	2,711	13,059
Meningococcal infections: Total	49	50	38	2,377	2,868	2,152
Civilian	49	50	37	2,364	2,857	2,132
Military	-	-	1	13	11	16
Mumps	77	102	148	4,444	3,598	11,719
Pertussis	38	27	39	1,244	1,015	1,398
Rubella (German measles)	29	25	60	2,093	1,850	10,956
Syphilis (Primary & Secondary): Civilian	679	724	556	28,516	24,874	20,004
Military	10	7	5	387	318	248
Tuberculosis	842	581	556	20,680	21,740	22,193
Tularemia	5	7	3	210	228	168
Typhoid fever	13	21	14	325	479	420
Typhus fever, tick-borne (RMSF)	19	7	8	941	1,126	1,060
Rabies, animal	85	116	105	5,094	6,128	4,185

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	4
Botulism (Calif. 5)	65	Paralytic	4
Cholera	-	Psittacosis (Mo. 1)	100
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (NYC 1, Minn. 1, Calif. 1)	67
Leptospirosis (La. 1, Tex. 1, Wash. 1, Hawaii 1)	64	Trichinosis (N.J. 1)	74
Plague	17	Typhus fever, flea-borne (endemic, murine) (Tex. 1, Hawaii 2)	38

TABLE III. Cases of specified notifiable diseases, United States, weeks ending October 23, 1982 and October 24, 1981 (42nd week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	333	129	1,099	49	771,070	812,979	475	497	54	179	8	169
NEW ENGLAND	17	3	41	5	18,797	19,892	9	25	-	11	-	1
Maine	1	-	-	-	883	1,063	-	2	-	-	-	-
N.H.	5	-	7	-	818	718	-	1	-	-	-	-
Vt.	-	-	-	-	353	347	-	2	-	-	-	-
Mass.	6	-	14	-	8,422	8,380	4	9	-	11	-	-
R.I.	1	-	-	1	1,233	1,178	3	6	-	-	-	-
Conn.	4	3	20	4	7,088	8,210	2	5	-	-	-	1
MID. ATLANTIC	44	3	112	11	97,597	97,825	72	112	1	13	1	9
Upstate N.Y.	11	3	44	3	15,980	16,737	5	14	1	1	-	1
N.Y. City	7	-	17	-	39,969	40,490	25	44	-	4	1	6
N.J.	12	-	20	-	17,885	18,424	11	20	-	2	-	1
Pa.	14	-	31	8	23,763	22,274	31	34	-	6	-	1
E.N. CENTRAL	59	3	268	10	108,064	121,312	52	41	-	11	-	4
Ohio	23	1	108	4	30,108	38,846	25	29	-	6	-	-
Ind.	6	-	75	3	13,651	10,404	15	-	-	-	-	-
Ill.	-	1	12	1	28,021	34,450	2	3	-	1	-	3
Mich.	30	1	68	-	28,574	26,660	10	9	-	4	-	-
Wis.	-	-	5	2	9,810	11,153	-	-	-	-	-	1
W.N. CENTRAL	9	15	81	4	38,670	38,732	6	9	3	3	1	4
Minn.	1	1	27	1	8,314	8,993	3	3	2	-	-	2
Iowa	2	4	39	1	3,886	4,270	-	-	-	-	1	-
Mo.	1	4	6	-	17,386	17,846	1	6	1	3	-	1
N. Dak.	-	-	-	-	479	489	-	-	-	-	-	-
S. Dak.	-	1	-	1	874	1,062	1	-	-	-	-	1
Nebr.	5	2	4	-	2,190	2,881	-	-	-	-	-	-
Kans.	-	3	5	1	6,383	6,096	1	-	-	-	-	-
S. ATLANTIC	68	24	169	8	200,097	199,639	56	131	10	23	1	9
Del.	-	-	-	-	3,380	3,197	-	10	-	2	-	-
Md.	8	-	22	-	25,254	23,680	1	22	4	2	-	3
D.C.	-	-	-	-	12,037	11,289	-	7	-	-	-	-
Va.	1	7	32	1	16,121	18,383	-	7	-	-	1	1
W. Va.	4	-	15	-	2,293	3,028	1	2	-	-	-	-
N.C.	12	-	26	1	32,273	30,940	4	8	-	4	-	-
S.C.	1	2	2	-	19,732	19,253	13	15	-	1	-	-
Ga.	2	3	14	-	36,894	41,546	12	22	1	4	-	1
Fla.	40	12	58	6	52,013	48,413	25	38	5	10	-	4
E.S. CENTRAL	23	12	59	2	67,186	67,942	17	25	6	-	-	-
Ky.	7	-	1	-	9,083	8,344	10	5	1	-	-	-
Tenn.	3	7	26	-	26,549	25,636	2	16	2	-	-	-
Ala.	10	4	16	2	19,536	20,749	1	4	2	-	-	-
Miss.	3	1	16	-	12,018	13,213	4	-	-	-	-	-
W.S. CENTRAL	18	39	184	1	107,486	107,633	97	29	2	66	-	26
Ark.	-	7	16	-	8,750	8,129	2	-	-	4	-	-
La.	1	8	24	-	20,081	18,778	10	2	-	-	-	-
Okla.	2	5	34	-	11,871	11,623	5	2	2	3	-	-
Tex.	15	19	110	1	66,893	69,107	80	25	-	59	-	26
MOUNTAIN	45	1	40	3	26,269	31,876	53	13	6	12	2	2
Mont.	-	1	-	-	1,084	1,168	2	-	-	-	-	-
Idaho	1	-	-	-	1,277	1,434	1	-	-	-	-	1
Wyo.	-	-	-	-	772	803	-	-	-	-	-	-
Colo.	11	-	19	1	7,081	8,542	8	2	1	-	-	-
N. Mex.	-	-	1	-	3,888	3,821	9	-	-	2	-	-
Ariz.	3	-	11	-	6,860	9,415	25	3	1	7	1	-
Utah	30	-	5	2	1,293	1,588	4	2	1	2	-	1
Nev.	-	-	4	-	4,344	6,407	4	6	2	1	1	-
PACIFIC	50	29	155	5	109,105	128,028	113	112	28	40	1	106
Wash.	5	1	11	-	9,231	10,672	4	4	1	3	-	8
Oreg.	-	-	3	-	6,475	7,661	7	4	1	-	1	1
Calif.	39	27	132	5	88,591	103,896	101	103	25	37	-	67
Alaska	-	1	5	-	2,742	3,290	-	-	-	-	-	1
Hawaii	6	-	4	-	2,083	2,520	1	1	1	-	-	28
Guam	U	-	-	-	97	98	U	U	U	U	U	-
P.R.	-	-	1	1	2,207	2,627	1	-	-	3	-	1
V.I.	U	-	-	-	181	193	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	297	357	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 23, 1982 and October 24, 1981 (42nd week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	28	847	60	1,443	2,711	49	2,377	77	4,444	36	29	2,093	1,856
NEW ENGLAND	-	43	-	15	83	5	127	1	183	2	-	20	119
Maine	-	-	-	-	5	-	9	-	41	-	-	-	33
N.H.	-	2	-	3	6	-	15	-	16	-	-	10	51
Vt.	-	-	-	2	3	1	9	-	7	-	-	-	-
Mass.	-	24	-	4	59	2	32	-	86	2	-	5	23
R.I.	-	3	-	-	-	2	16	-	15	-	-	1	-
Conn.	-	14	-	8	10	-	46	1	18	-	-	4	12
MID. ATLANTIC	7	148	1	162	844	6	424	2	286	13	-	102	221
Upstate N.Y.	-	27	1	112	210	1	147	1	72	3	-	49	107
N.Y. City	2	58	-	42	87	1	82	-	47	2	-	34	54
N.J.	3	32	-	4	58	-	85	1	42	-	-	18	47
Pa.	2	31	-	4	489	4	110	-	125	8	-	1	13
E.N. CENTRAL	-	58	-	76	81	6	293	28	2,250	2	2	181	386
Ohio	-	12	-	1	16	3	105	15	1,592	2	-	-	3
Ind.		3	-	2	9	-	29	-	37	-	-	28	132
Ill.	-	13	-	23	23	1	74	3	185	-	1	67	98
Mich.	-	26	-	50	30	2	68	9	323	-	-	49	34
Wis.	-	4	-	-	3	-	17	1	113	-	1	37	119
W.N. CENTRAL	-	20	-	49	10	5	111	6	582	1	-	59	78
Minn.	-	2	-	-	3	2	29	4	443	-	-	5	7
Iowa	-	7	-	-	1	2	11	-	34	1	-	-	4
Mo.	-	5	-	2	1	-	29	1	18	-	-	38	2
N. Dak.	-	1	-	-	-	-	8	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	5	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	13	-	-	-	-	-	1
Kans.	-	2	-	44	1	-	16	1	86	-	-	15	64
S. ATLANTIC	3	121	37	81	444	13	505	5	270	7	1	82	136
Del.	-	4	-	-	-	-	-	-	13	-	-	1	1
Md.	-	18	-	3	5	-	34	-	29	-	-	34	1
D.C.	-	4	-	1	1	1	4	-	-	-	-	-	-
Va.	-	39	-	14	9	-	59	1	37	1	-	13	6
W. Va.	-	7	-	3	9	-	9	1	94	2	-	1	22
N.C.	3	6	-	1	3	2	99	-	16	1	-	1	5
S.C.	-	4	-	-	2	5	80	1	17	-	-	1	8
Ga.	-	16	-	-	111	-	101	2	18	2	-	14	37
Fla.	-	23	37	59	304	5	139	-	46	1	1	17	56
E.S. CENTRAL	1	9	2	9	5	2	146	-	52	1	-	46	36
Ky.	-	5	-	1	1	1	25	-	18	-	-	28	22
Tenn.	-	-	-	6	2	1	64	-	19	1	-	2	13
Ala.	1	1	2	2	2	-	46	-	9	-	-	-	1
Miss.	-	3	-	-	-	-	11	-	6	-	-	16	-
W.S. CENTRAL	3	61	15	149	862	3	282	15	208	4	5	111	168
Ark.	-	4	-	-	21	1	14	-	7	-	-	1	3
La.	1	5	-	2	4	1	60	-	6	3	-	1	9
Okla.	-	8	-	30	6	-	27	-	-	-	-	3	2
Tex.	2	44	15	117	831	1	181	15	195	1	5	106	154
MOUNTAIN	-	27	4	23	35	1	104	7	99	1	-	78	93
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	11
Colo.	-	11	-	6	10	1	44	-	16	1	-	6	30
N. Mex.	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz.	-	7	4	16	5	-	18	6	47	-	-	14	21
Utah	-	3	-	-	-	-	9	-	20	-	-	22	8
Nev.	-	-	-	-	10	-	2	1	7	-	-	12	11
PACIFIC	14	363	1	679	347	8	385	13	514	5	21	1,414	619
Wash.	-	20	-	41	3	3	46	2	66	-	-	38	89
Oreg.	1	14	-	23	5	-	71	-	-	-	-	6	53
Calif.	13	324	1	609	332	5	253	10	422	5	21	1,357	461
Alaska	-	1	-	1	-	-	11	-	10	-	-	5	1
Hawaii	-	4	-	5	7	-	4	1	16	-	-	8	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	2	127	283	-	8	3	78	-	-	11	4
V.I.	U	-	U	-	24	U	-	U	3	U	U	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 23, 1982 and October 24, 1981 (42nd week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	26,516	24,874	842	20,880	210	13	325	19	941	5,084
NEW ENGLAND	473	479	16	573	6	-	17	-	10	40
Maine	4	5	2	48	-	-	-	-	-	26
N.H.	1	12	-	20	-	-	-	-	1	1
Vt.	2	15	-	13	-	-	2	-	-	1
Mass.	318	309	11	363	6	-	13	-	5	6
R.I.	20	29	1	26	-	-	-	-	2	-
Conn.	128	109	2	103	-	-	2	-	2	6
MID. ATLANTIC	3,594	3,800	109	3,458	7	2	59	2	43	181
Upstate N.Y.	373	553	20	602	7	-	9	-	15	97
N.Y. City	2,141	2,141	55	1,328	-	2	31	1	3	-
N.J.	499	510	5	853	-	-	11	-	13	17
Pa.	581	596	29	675	-	-	8	1	12	67
E.N. CENTRAL	1,514	1,888	78	3,136	1	-	26	-	82	522
Ohio	259	252	11	524	-	-	12	-	76	74
Ind.	167	239	10	391	-	-	2	-	-	70
Ill.	774	1,018	32	1,348	-	-	3	-	6	263
Mich.	239	302	19	706	-	-	8	-	-	6
Wis.	75	77	6	167	1	-	1	-	-	109
W.N. CENTRAL	455	548	27	609	32	2	16	-	33	1,063
Minn.	104	166	2	106	-	2	8	-	-	182
Iowa	26	24	4	63	2	-	1	-	4	339
Mo.	259	311	14	295	21	-	4	-	11	105
N. Dak.	7	8	-	12	-	-	-	-	-	97
S. Dak.	2	2	1	27	1	-	-	-	4	88
Nebr.	11	9	2	26	3	-	2	-	2	114
Kans.	46	28	4	80	5	-	1	-	12	138
S. ATLANTIC	7,259	6,621	122	4,281	12	-	39	8	506	982
Del.	20	13	-	38	-	-	-	-	-	2
Md.	390	479	19	493	1	-	9	1	49	53
D.C.	390	538	16	180	-	-	-	-	-	-
Va.	496	571	22	472	4	-	3	-	72	513
W. Va.	25	21	3	132	-	-	4	-	8	38
N.C.	584	519	4	671	-	-	2	6	217	85
S.C.	446	463	14	409	6	-	3	-	105	54
Ga.	1,526	1,637	20	673	-	-	-	1	50	174
Fla.	3,383	2,380	24	1,213	1	-	18	-	5	63
E.S. CENTRAL	1,830	1,630	45	1,901	8	2	19	2	88	574
Ky.	110	91	18	505	-	2	4	-	1	118
Tenn.	524	594	12	614	6	-	3	1	56	318
Ala.	676	480	9	510	-	-	9	1	15	131
Miss.	520	485	6	272	2	-	3	-	16	7
W.S. CENTRAL	6,950	5,943	33	2,512	108	1	33	6	160	976
Ark.	170	126	6	290	64	-	5	1	28	135
La.	1,554	1,350	-	366	3	-	3	-	2	31
Okla.	147	133	-	279	31	-	3	3	75	168
Tex.	5,079	4,334	27	1,577	10	1	22	2	55	642
MOUNTAIN	674	614	18	580	27	-	13	1	13	259
Mont.	5	11	-	37	4	-	-	-	4	84
Idaho	24	18	-	28	1	-	-	1	4	10
Wyo.	16	10	-	8	5	-	-	-	1	21
Colo.	179	181	4	72	4	-	3	-	1	47
N. Mex.	163	107	1	68	2	-	-	-	1	23
Ariz.	183	157	9	240	-	-	7	-	-	52
Utah	20	23	3	39	11	-	2	-	-	18
Nev.	84	107	1	88	-	-	1	-	2	4
PACIFIC	3,767	3,551	94	3,632	9	6	103	-	6	517
Wash.	128	148	7	230	1	-	6	-	-	7
Oreg.	91	90	3	145	1	-	4	-	1	3
Calif.	3,444	3,244	73	2,952	6	6	89	-	5	428
Alaska	14	11	-	74	1	-	1	-	-	79
Hawaii	90	58	11	231	-	-	3	-	-	-
Guam	1	-	U	38	-	U	-	U	-	-
P.R.	647	642	-	352	-	-	2	-	-	45
V.I.	21	15	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending October 23, 1982 (42nd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	669	463	134	37	19	16	43
Boston, Mass	198	125	42	15	6	10	21
Bridgeport, Conn	46	35	7	1	1	2	4
Cambridge, Mass	21	18	2	1	-	-	2
Fall River, Mass	34	29	5	-	-	-	-
Hartford, Conn	67	41	18	5	2	1	2
Lowell, Mass	27	17	8	2	-	-	-
Lynn, Mass	24	22	1	1	-	-	1
New Bedford, Mass	21	11	6	2	2	-	-
New Haven, Conn	32	28	2	1	1	-	1
Providence, R.I	61	44	10	2	2	3	5
Somerville, Mass	10	7	3	-	-	-	-
Springfield, Mass	49	31	12	4	2	-	4
Waterbury, Conn	29	21	5	2	1	-	2
Worcester, Mass	50	34	13	1	2	-	1
MID ATLANTIC	2,395	1,560	532	175	66	76	98
Albany, N.Y	49	29	10	3	1	6	-
Allentown, Pa	21	19	2	-	-	-	-
Buffalo, N.Y	125	78	25	10	4	8	12
Camden, N.J	38	28	8	3	1	-	1
Elizabeth, N.J	28	18	7	2	1	-	-
Erie, Pa†	38	30	6	1	-	1	1
Jersey City, N.J	57	42	10	2	3	-	3
N.Y. City, N.Y	1,398	857	314	112	33	42	44
Newark, N.J	64	33	17	7	4	3	10
Paterson, N.J	40	28	6	4	2	-	3
Philadelphia, Pa†	118	68	26	9	4	11	3
Pittsburgh, Pa†	61	35	18	5	-	3	-
Reading, Pa	27	23	4	-	-	-	2
Rochester, N.Y	123	89	25	6	2	1	8
Schenectady, N.Y	27	22	5	-	-	-	1
Scranton, Pa†	25	14	8	2	-	1	2
Syracuse, N.Y	72	47	21	3	1	-	1
Trenton, N.J	31	20	10	1	-	-	-
Utica, N.Y	25	20	4	1	-	-	1
Yonkers, N.Y	34	24	6	4	-	-	4
E.N. CENTRAL	2,292	1,475	518	148	71	79	61
Akron, Ohio	78	50	13	7	4	4	-
Canton, Ohio	42	28	10	2	1	1	1
Chicago, Ill	509	298	137	32	20	22	12
Cincinnati, Ohio	142	86	38	10	3	5	9
Cleveland, Ohio	176	106	40	19	6	5	-
Columbus, Ohio	139	90	29	12	3	5	6
Dayton, Ohio	95	61	22	5	3	4	2
Detroit, Mich	265	166	64	22	5	8	4
Evansville, Ind	49	36	10	2	-	1	-
Fort Wayne, Ind	52	32	15	2	3	-	2
Gary, Ind	23	12	6	5	-	-	1
Grand Rapids, Mich	50	36	11	2	1	-	2
Indianapolis, Ind	153	90	43	9	3	8	2
Madison, Wis	31	17	6	1	1	6	1
Milwaukee, Wis	166	122	27	7	5	5	6
Peoria, Ill	52	34	15	1	2	-	6
Rockford, Ill	45	29	9	4	2	1	2
South Bend, Ind	55	37	8	3	5	2	3
Toledo, Ohio §	101	96	-	1	2	1	2
Youngstown, Ohio	69	49	15	2	2	1	-
W.N. CENTRAL	738	505	142	36	20	35	31
Des Moines, Iowa	69	46	19	3	-	1	5
Duluth, Minn.	26	22	3	-	1	-	1
Kansas City, Kans	38	27	7	2	-	2	1
Kansas City, Mo	118	77	28	5	3	5	6
Lincoln, Nebr.	29	22	5	-	1	1	1
Minneapolis, Minn.	91	57	11	10	5	8	3
Omaha, Nebr	68	52	11	2	2	1	6
St. Louis, Mo	172	117	30	8	5	12	5
St. Paul, Minn.	72	53	13	1	2	3	2
Wichita, Kans	55	32	15	5	1	2	1
S. ATLANTIC	1,098	698	239	76	43	39	30
Atlanta, Ga	156	88	41	20	4	3	4
Baltimore, Md	200	106	64	16	8	6	4
Charlotte, N.C	74	48	13	6	3	4	2
Jacksonville, Fla	92	59	15	7	5	6	1
Miami, Fla	82	49	21	3	7	2	-
Norfolk, Va	49	28	15	1	1	4	2
Richmond, Va	74	47	12	8	5	2	6
Savannah, Ga	39	30	6	2	1	-	2
St. Petersburg, Fla	83	61	18	1	-	3	4
Tampa, Fla	76	44	21	5	3	3	1
Washington, D.C. §	129	113	1	4	3	5	2
Wilmington, Del	44	25	12	3	3	1	2
E.S. CENTRAL	740	470	179	33	32	26	30
Birmingham, Ala	124	73	31	5	10	5	2
Chattanooga, Tenn	66	51	9	3	3	-	5
Knoxville, Tenn	57	38	13	3	2	1	5
Louisville, Ky	125	84	24	6	6	5	7
Memphis, Tenn	160	106	31	7	7	9	4
Mobile, Ala	24	14	7	1	-	2	1
Montgomery, Ala	44	27	15	-	-	2	2
Nashville, Tenn	140	77	49	8	4	2	4
W.S. CENTRAL	993	544	267	77	39	66	22
Austin, Tex	43	25	12	1	3	2	1
Baton Rouge, La	23	12	10	1	-	-	1
Corpus Christi, Tex	50	27	12	6	2	3	-
Dallas, Tex	187	102	52	14	6	13	2
El Paso, Tex	72	41	15	6	2	8	3
Fort Worth, Tex	78	49	20	4	5	-	2
Houston, Tex	58	28	16	9	3	2	-
Little Rock, Ark	59	34	18	2	1	4	3
New Orleans, La	123	59	28	10	3	23	-
San Antonio, Tex	181	89	58	17	10	7	6
Shreveport, La	36	23	11	-	2	-	2
Tulsa, Okla	83	55	15	7	2	4	2
MOUNTAIN	670	414	169	48	19	20	32
Albuquerque, N.Mex	83	42	23	13	2	3	2
Colo. Springs, Colo	32	23	6	2	1	-	6
Denver, Colo	132	72	42	10	3	5	3
Las Vegas, Nev	72	36	25	6	4	1	4
Ogden, Utah	25	17	8	-	-	-	-
Phoenix, Ariz	168	117	32	9	4	6	3
Pueblo, Colo	26	21	5	-	-	-	3
Salt Lake City, Utah	47	24	10	6	4	3	-
Tucson, Ariz	85	62	18	2	1	2	11
PACIFIC	1,692	1,072	396	130	47	46	65
Berkeley, Calif	16	13	1	2	-	-	1
Fresno, Calif	78	55	12	5	4	2	2
Glendale, Calif	26	24	2	-	-	-	1
Honolulu, Hawaii	64	38	17	3	4	2	1
Long Beach, Calif	97	57	31	8	1	-	4
Los Angeles, Calif	490	300	119	45	14	10	13
Oakland, Calif	51	32	11	7	-	1	1
Pasadena, Calif	35	24	5	3	2	1	4
Portland, Oreg	135	82	38	7	4	4	8
Sacramento, Calif	56	32	11	5	2	5	5
San Diego, Calif	120	70	35	10	3	2	7
San Francisco, Calif	129	80	38	5	2	4	-
San Jose, Calif	156	108	27	14	3	3	9
Seattle, Wash	151	97	32	12	4	6	5
Spokane, Wash	48	29	9	3	4	1	4
Tacoma, Wash	43	31	7	1	-	4	-
TOTAL	11,291††	7,201	2,576	760	348	402	410

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Rubella — Continued

Since 1979, the annual provisional total of both confirmed and compatible CRS cases has declined from 53 in 1979 to 17 in 1980 to five in 1981.[†] This decrease in reported confirmed and compatible CRS cases correlates with the decline in the reported incidence rate of rubella among women of childbearing age.

Age-specific data were available for 1,674 (81%) of the cases reported for 1981. The age-specific incidence rates of rubella have continued to decline for all age groups over the past 3 years. The greatest decline between 1980 and 1981 occurred in the 15- to 19- and 20- to 24-year-old age groups (Table 3), an occurrence first reported in 1980. In 1978 and 1979, 74% of the reported rubella cases were among persons ≥15 years old, and the highest rate was in the 15- to 19-year-old age group. In 1981, however, only 37% of the cases were reported among persons ≥15 years old, and the highest rate occurred among the <5-year-olds. In 1981, for the first time since age-specific reporting was instituted on a national basis in 1975, the rate among schoolage children 5-9 years old significantly exceeded the rate in 15- to 19-year-olds.
Reported by Immunization Br, Center for Prevention Svcs, CDC.

Editorial Note: The initial recommendation of the Public Health Service Immunization Practices Advisory Committee (ACIP) for rubella control was to vaccinate preschool and elementary school children of both sexes; vaccination of older individuals received only secondary emphasis. This approach caused a dramatic decline in rubella incidence and eliminated the characteristic 6- to 9-year cycle of epidemic rubella (*2*). It also resulted in a marked change in the age characteristics for reported rubella patients.

The 1981 and 1982 surveillance data, excluding California, (cases from California generally involved adults in outbreaks at hospitals, universities, and places of employment) continue to show a steady decline in reported cases of rubella to record low levels. Some of this decrease may be due to the Childhood Immunization Initiative that began in 1977, the goal of which was to achieve and maintain immunization levels in excess of 90% for all childhood vaccine-preventable diseases including rubella. Assessment of rubella immunization levels of 3.4 million children entering school (kindergarten and 1st grade) in the 50 states and the District of Columbia showed a level of 96% for the 1981-1982 school year. To ensure continued high immunity

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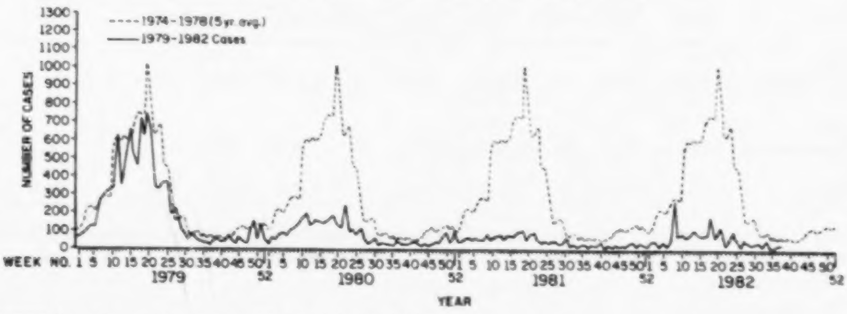
[†] Cases in the CRS registry are reported by date of birth. Data are reported as provisional until at least 3 years have elapsed since year of birth. Data from 73 of the most recent reports with known date of birth and date of report showed that 64 (88%) cases were reported within the first year after birth.

FIGURE 1. Rubella incidence by week — United States, 1979-1982*



*1982 data is through the first 38 weeks (ending September 25).

Rubella – Continued

levels, all 50 states and the District of Columbia have enacted and enforced rubella-immunization requirements for school entry. The Measles Elimination Initiative, begun in 1978, has also had a major impact on the reduction of rubella incidence, since most of the measles vaccine administered during this program has been given as MMR (combined measles, mumps, rubella vaccine) or MR (combined measles, rubella vaccine). Approximately 75% of the measles vaccine administered in the public sector has been MMR or MR vaccine.

Before rubella vaccine became available in 1969, most reported rubella cases occurred among children <15 years of age. The initial rubella control policy lowered the attack rates for all age groups, but with proportionately greater declines in the <15-year age group. Data on age-specific incidence rates for 1981 show that rates for adolescents and young adults are now lower than those for young children. The greater recent decrease in rubella incidence among adolescents and young adults probably resulted because 1) young children targeted for vaccination during 1969 and the early 1970s have moved into older age groups, and 2) efforts have increased over the past 3-4 years to vaccinate the remaining susceptible adolescents and young adults. In the <5-year age group, 287 (46%) of the 626 reported cases were <1 year of age and thus below the earliest recommended age for vaccination.

TABLE 3. Percentage distribution and estimated incidence rates[*] of reported rubella cases, by age group – United States, 1979-1981

Age group	1979 No.	1979 %	1979 Rate	1980 No.	1980 %	1980 Rate	1981[†] No.	1981[†] %	1981[†] Rate	Percentage rate change 1979-1981[†]
<1	339[§]	4.3	14.8	294[§]	10.0	11.0	287	17.1	9.9	-33.1
1-4	443[§]	5.6	5.2	401[§]	13.6	4.1	339	20.3	3.2	-38.5
5-9	583[§]	7.3	5.1	477	16.2	3.8	277	16.5	2.1	-58.8
10-14	943	11.9	7.6	390	13.2	2.8	153	9.1	1.0	-86.8
15-19	2,748	34.6	19.1	602	20.4	3.8	210	12.5	1.3	-93.2
20-24	1,803[§]	22.7	12.7	438[§]	14.9	2.7	162	9.7	0.9	-92.9
25-29	516[§]	6.5	4.0	165[§]	5.6	1.1	102	6.1	0.6	-85.0
≥30	569	7.2	0.8	177	6.0	0.2	144[¶]	8.6	0.2	-75.0
Total Age known	7,944	67.4	–	2,944	75.4	–	1,674	80.6	–	–
Total Age unknown	3,851	32.6	–	960	24.6	–	403	19.4	–	–
TOTAL	11,795	100.0	5.3	3,904	100.0	1.7	2,077	100.0	0.9	-83.0

[*] Estimated incidence rate = cases per 100,000 population extrapolated from the age distribution of cases reported by age from 46 reporting areas in 1979 and 51 areas in 1980 and 1981.

[†] Provisional Data

[§] Excludes Arizona

[¶] Excludes Illinois

Rubella – Continued

Increased efforts to vaccinate adolescents and young adults were prompted by continued reporting of 27-59 cases of CRS per year from 1971 through 1979 (*2*) and by the knowledge that 10%-25% of adolescents and adults were susceptible to rubella (*3-5*). In the public sector, where between 40% and 50% of the rubella vaccine is distributed and administered, increasing numbers of doses were given to persons ≥15 years of age between 1979 and 1981; 234,000 doses were given in 1979, 325,000 in 1980, and 333,000 in 1981.

The current strategy for rubella control is to vaccinate 1) all infants at approximately 15 months of age in combination with measles and mumps vaccine; 2) all schoolchildren who were not vaccinated in infancy; and 3) susceptible individuals who have left high school, particularly females of childbearing age, military personnel, students and employees of educational and training institutions (such as colleges and universities), and health personnel of both sexes (*6*).

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Current Trends

Acquired Immune Deficiency Syndrome (AIDS): Precautions for Clinical and Laboratory Staffs

The etiology of the underlying immune deficiencies seen in AIDS cases is unknown. One hypothesis consistent with current observations is that a transmissible agent may be involved. If so, transmission of the agent would appear most commonly to require intimate, direct contact involving mucosal surfaces, such as sexual contact among homosexual males, or through parenteral spread, such as occurs among intravenous drug abusers and possibly hemophilia patients using Factor VIII products. Airborne spread and interpersonal spread through casual contact do not seem likely. These patterns resemble the distribution of disease and modes of spread of hepatitis B virus, and hepatitis B virus infections occur very frequently among AIDS cases.

There is presently no evidence of AIDS transmission to hospital personnel from contact with affected patients or clinical specimens. Because of concern about a possible transmissible agent, however, interim suggestions are appropriate to guide patient-care and laboratory personnel, including those whose work involves experimental animals. At present, it appears prudent for hospital personnel to use the same precautions when caring for patients with AIDS as those used for patients with hepatitis B virus infection, in which blood and body fluids likely to have been contaminated with blood are considered infective. Specifically, patient-care and laboratory personnel should take precautions to avoid direct contact of skin and mucous membranes with blood, blood products, excretions, secretions, and tissues of persons judged likely to have AIDS. The following precautions do not specifically address outpatient care, dental care, surgery, necropsy, or hemodialysis of AIDS patients. In general, procedures appropriate for patients known to be infected with hepatitis B virus are advised, and blood and organs of AIDS patients should not be donated.

The precautions that follow are advised for persons and specimens from persons with: opportunistic infections that are not associated with underlying immunosuppressive disease or therapy; Kaposi's sarcoma (patients under 60 years of age); chronic generalized lymphadenopathy, unexplained weight loss and/or prolonged unexplained fever in persons who belong to groups with apparently increased risks of AIDS (homosexual males, intravenous drug abusers, Haitian entrants, hemophiliacs); and possible AIDS (hospitalized for evaluation). Hospitals and laboratories should adapt the following suggested precautions to their individual circumstances; these recommendations are not meant to restrict hospitals from implementing additional precautions.

A. The following precautions are advised in providing care to AIDS patients:

1. Extraordinary care must be taken to avoid accidental wounds from sharp instruments contaminated with potentially infectious material and to avoid contact of open skin lesions with material from AIDS patients.

HE 20.7009:

2. Gloves should be worn when handling blood specimens, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.
3. Gowns should be worn when clothing may be soiled with body fluids, blood, secretions, or excretions.
4. Hands should be washed after removing gowns and gloves and before leaving the rooms of known or suspected AIDS patients. Hands should also be washed thoroughly and immediately if they become contaminated with blood.
5. Blood and other specimens should be labeled prominently with a special warning, such as "Blood Precautions" or "AIDS Precautions." If the outside of the specimen container is visibly contaminated with blood, it should be cleaned with a disinfectant (such as a 1:10 dilution of 5.25% sodium hypochlorite [household bleach] with water). All blood specimens should be placed in a second container, such as an impervious bag, for transport. The container or bag should be examined carefully for leaks or cracks.
6. Blood spills should be cleaned up promptly with a disinfectant solution, such as sodium hypochlorite (see above).
7. Articles soiled with blood should be placed in an impervious bag prominently labeled "AIDS Precautions" or "Blood Precautions" before being sent for reprocessing or disposal. Alternatively, such contaminated items may be placed in plastic bags of a particular color designated solely for disposal of infectious wastes by the hospital. Disposable items should be incinerated or disposed of in accord with the hospital's policies for disposal of infectious wastes. Reusable items should be reprocessed in accord with hospital policies for hepatitis B virus-contaminated items. Lensed instruments should be sterilized after use on AIDS patients.
8. Needles should not be bent after use, but should be promptly placed in a puncture-resistant container used solely for such disposal. Needles should not be reinserted into their original sheaths before being discarded into the container, since this is a common cause of needle injury.
9. Disposable syringes and needles are preferred. Only needle-locking syringes or one-piece needle-syringe units should be used to aspirate fluids from patients, so that collected fluid can be safely discharged through the needle, if desired. If reusable syringes are employed, they should be decontaminated before reprocessing.
10. A private room is indicated for patients who are too ill to use good hygiene, such as those with profuse diarrhea, fecal incontinence, or altered behavior secondary to central nervous system infections.

Precautions appropriate for particular infections that concurrently occur in AIDS patients should be added to the above, if needed.

B. The following precautions are advised for persons performing laboratory tests or studies on clinical specimens or other potentially infectious materials (such as inoculated tissue cultures, embryonated eggs, animal tissues, etc.) from known or suspected AIDS cases:

1. Mechanical pipetting devices should be used for the manipulation of all liquids in the laboratory. Mouth pipetting should not be allowed.
2. Needles and syringes should be handled as stipulated in Section A (above).
3. Laboratory coats, gowns, or uniforms should be worn while working with potentially infectious materials and should be discarded appropriately before leaving the laboratory.
4. Gloves should be worn to avoid skin contact with blood, specimens containing blood, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.

Acquired Immune Deficiency Syndrome — Continued

5. All procedures and manipulations of potentially infectious material should be performed carefully to minimize the creation of droplets and aerosols.
6. Biological safety cabinets (Class I or II) and other primary containment devices (e.g., centrifuge safety cups) are advised whenever procedures are conducted that have a high potential for creating aerosols or infectious droplets. These include centrifuging, blending, sonicating, vigorous mixing, and harvesting infected tissues from animals or embryonated eggs. Fluorescent activated cell sorters generate droplets that could potentially result in infectious aerosols. Translucent plastic shielding between the droplet-collecting area and the equipment operator should be used to reduce the presently uncertain magnitude of this risk. Primary containment devices are also used in handling materials that might contain concentrated infectious agents or organisms in greater quantities than expected in clinical specimens.
7. Laboratory work surfaces should be decontaminated with a disinfectant, such as sodium hypochlorite solution (see A5 above), following any spill of potentially infectious material and at the completion of work activities.
8. All potentially contaminated materials used in laboratory tests should be decontaminated, preferably by autoclaving, before disposal or reprocessing.
9. All personnel should wash their hands following completion of laboratory activities, removal of protective clothing, and before leaving the laboratory.

C. The following additional precautions are advised for studies involving experimental animals inoculated with tissues or other potentially infectious materials from individuals with known or suspected AIDS.

1. Laboratory coats, gowns, or uniforms should be worn by personnel entering rooms housing inoculated animals. Certain nonhuman primates, such as chimpanzees, are prone to throw excreta and to spit at attendants; personnel attending inoculated animals should wear molded surgical masks and goggles or other equipment sufficient to prevent potentially infective droplets from reaching the mucosal surfaces of their mouths, nares, and eyes. In addition, when handled, other animals may disturb excreta in their bedding. Therefore, the above precautions should be taken when handling them.
2. Personnel should wear gloves for all activities involving direct contact with experimental animals and their bedding and cages. Such manipulations should be performed carefully to minimize the creation of aerosols and droplets.
3. Necropsy of experimental animals should be conducted by personnel wearing gowns and gloves. If procedures generating aerosols are performed, masks and goggles should be worn.
4. Extraordinary care must be taken to avoid accidental sticks or cuts with sharp instruments contaminated with body fluids or tissues of experimental animals inoculated with material from AIDS patients.
5. Animal cages should be decontaminated, preferably by autoclaving, before they are cleaned and washed.
6. Only needle-locking syringes or one-piece needle-syringe units should be used to inject potentially infectious fluids into experimental animals.

The above precautions are intended to apply to both clinical and research laboratories. Biological safety cabinets and other safety equipment may not be generally available in clinical laboratories. Assistance should be sought from a microbiology laboratory, as needed, to assure containment facilities are adequate to permit laboratory tests to be conducted safely.

Reported by Hospital Infections Program, Div of Viral Diseases, Div of Host Factors, Div of Hepatitis and

Acquired Immune Deficiency Syndrome – Continued

Viral Enteritis, AIDS Activity, Center for Infectious Diseases, Office of Biosafety, CDC; Div of Safety, National Institutes of Health.

Epidemiologic Notes and Reports

Isolation of *E. coli* 0157:H7 from Sporadic Cases of Hemorrhagic Colitis — United States

Since the beginning of August 1982, stool isolates of *Escherichia coli* serotype 0157:H7 have been identified at CDC from specimens obtained from four patients in two states. Three of four patients had an unusual bloody diarrheal illness; each illness began suddenly with severe crampy abdominal pain followed within 24 hours by watery diarrhea, which subsequently became markedly bloody. One patient underwent a laparotomy to rule out appendicitis. All patients recovered within 7 days without complications or specific therapy. In one instance, *E. coli* 0157:H7 was isolated from the stool of a patient's spouse. This fourth patient had abdominal cramps and non-bloody diarrhea. Since early August, 25 additional sporadic cases of this unusual illness have been reported to CDC, but appropriately collected stool specimens were available in only two of these. *E. coli* 0157:H7 was not isolated from either specimen. The four patients with sporadic cases in which *E. coli* was isolated from

(Continued on page 585)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		43rd Week Ending			Cumulative, First 43 Weeks		
		October 30, 1982	October 31, 1981	Median 1977-1981	October 30, 1982	October 31, 1981	Median 1977-1981
Aseptic meningitis		307	216	216	7,307	8,032	6,288
Brucellosis		7	4	4	137	141	147
Encephalitis:	Primary (arthropod-borne & unspec.)	41	31	30	1,149	1,238	980
	Post-infectious	1	-	3	50	79	181
Gonorrhea:	Civilian	14,141	19,008	21,991	787,973	831,987	829,232
	Military	276	520	511	21,897	23,237	22,824
Hepatitis:	Type A	425	531	567	18,521	20,772	24,118
	Type B	402	484	308	17,572	16,877	13,606
	Non A, Non B	40	N	N	1,879	N	N
	Unspecified	154	213	207	7,402	8,944	8,516
Legionellosis		4	N	N	428	N	N
Leprosy		3	4	3	165	214	147
Malaria		16	15	17	883	1,184	633
Measles (rubeola)		44	28	61	1,491	2,739	13,074
Meningococcal infections:	Total	42	58	35	2,420	2,928	2,179
	Civilian	42	58	35	2,407	2,915	2,159
	Military	-	-	-	13	11	16
Mumps		46	59	105	4,492	3,655	11,824
Pertussis		137	24	24	1,383	1,039	1,422
Rubella (German measles)		16	9	51	2,109	1,865	11,007
Syphilis (Primary & Secondary):	Civilian	604	590	590	27,127	25,464	20,615
	Military	11	9	8	386	325	258
Tuberculosis		440	641	557	21,139	22,381	22,745
Tularemia		12	3	3	220	231	171
Typhoid fever		5	16	9	333	495	432
Typhus fever, tick-borne (RMSF)		4	8	12	945	1,134	1,075
Rabies, animal		112	108	98	5,203	6,238	4,281

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	4
Botulism (Md. 1, Utah 1, Calif. 1)	70	Paralytic	4
Cholera	-	Psittacosis (S.C. 1)	101
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus	67
Leptospirosis	55	Trichinosis (Ohio 1, Mo. 1)	77
Plague	18	Typhus fever, flea-borne (endemic, murine) (Hawaii 2)	38

TABLE III. Cases of specified notifiable diseases, United States, weeks ending October 30, 1982 and October 31, 1981 (43rd week)

Reporting Area	Aseptic Menin-gitis	Brucel-losis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	1982	Cum 1982	Cum 1982	Cum 1982	Cum 1982	Cum 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	307	137	1,149	50	787,973	831,937	425	402	40	154	4	165
NEW ENGLAND	8	3	50	5	19,108	20,455	15	22	1	9	1	1
Maine	-	-	-	-	992	1,100	-	2	-	-	-	-
N.H.	2	-	8	-	628	736	2	-	-	-	1	-
Vt.	-	-	-	-	361	362	-	1	-	-	-	-
Mass.	4	-	20	-	8,602	8,629	6	10	-	9	-	-
R.I.	1	-	-	1	1,276	1,206	2	1	-	-	-	-
Conn.	1	3	22	4	7,249	8,422	5	8	1	-	-	1
MID. ATLANTIC	37	3	118	11	99,031	100,263	48	64	5	14	-	9
Upstate N.Y.	13	3	49	3	16,670	17,348	11	17	2	3	-	1
N.Y. City	U	-	17	-	39,959	41,490	U	U	U	U	U	6
N.J.	8	-	21	-	18,061	18,839	10	32	3	6	-	1
Pa.	16	-	31	8	24,341	22,586	27	15	-	5	-	1
E.N. CENTRAL	34	4	270	10	109,599	124,604	25	43	1	9	1	7
Ohio	13	1	111	4	30,434	39,056	8	8	-	3	1	-
Ind.	U	-	75	3	13,551	10,573	U	U	U	U	U	-
Ill.	1	2	15	1	28,305	36,170	9	10	1	1	-	6
Mich.	20	1	64	-	27,218	27,341	8	25	-	5	-	-
Wis.	-	-	5	2	10,091	11,464	-	-	-	-	-	1
W.N. CENTRAL	16	16	84	4	37,367	39,988	18	22	3	4	1	4
Minn.	-	1	27	1	5,404	6,305	5	5	-	-	-	2
Iowa	9	5	41	1	3,950	4,397	3	3	2	2	-	-
Mo.	1	4	6	-	17,841	18,557	7	5	1	2	1	1
N. Dak.	-	-	-	-	493	500	-	-	-	-	-	-
S. Dak.	-	1	-	1	994	1,066	-	1	-	-	-	1
Nebr.	4	2	5	-	2,217	2,981	-	1	-	-	-	-
Kans.	2	3	5	1	6,468	6,182	3	7	-	-	-	-
S. ATLANTIC	54	25	174	8	207,112	204,869	58	98	11	20	-	10
Del.	-	-	-	-	3,471	3,284	1	4	-	1	-	-
Md.	2	-	22	-	25,254	24,130	7	17	2	8	-	3
D.C.	-	-	-	-	12,463	11,598	1	3	-	-	-	-
Va.	18	8	33	1	16,656	18,821	12	17	3	3	-	1
W. Va.	U	-	15	-	2,293	3,089	U	U	U	U	U	-
N.C.	4	-	26	1	32,999	31,738	4	5	-	2	-	-
S.C.	1	2	2	-	20,081	19,911	8	8	2	-	-	-
Ga.	12	3	14	-	40,666	42,578	11	18	-	4	-	1
Fla.	17	12	62	6	53,229	49,722	14	26	4	2	-	5
E.S. CENTRAL	49	12	60	2	68,589	69,108	16	25	5	4	-	-
Ky.	1	-	1	-	9,307	8,530	2	2	1	1	-	-
Tenn.	2	7	27	-	27,171	26,293	2	8	2	1	-	-
Ala.	45	4	16	2	19,921	20,749	5	13	2	2	-	-
Miss.	1	1	16	-	12,190	13,536	7	2	-	-	-	-
W.S. CENTRAL	39	42	187	1	109,291	109,473	111	44	1	60	-	26
Ark.	1	7	16	-	8,889	8,251	-	1	-	7	-	-
La.	17	8	24	-	20,703	18,821	31	10	-	6	-	-
Okla.	5	7	35	-	12,014	11,939	28	15	1	13	-	-
Tex.	16	20	112	1	67,685	70,462	52	18	-	34	-	26
MOUNTAIN	17	2	40	3	26,908	32,579	27	13	3	3	1	2
Mont.	-	2	-	-	1,103	1,183	1	1	-	-	-	-
Idaho	-	-	-	-	1,292	1,452	-	-	-	-	-	1
Wyo.	1	-	-	-	790	823	-	-	-	-	-	-
Colo.	2	-	19	1	7,217	8,799	4	1	-	-	-	-
N. Mex.	2	-	1	-	3,668	3,634	8	1	-	1	-	-
Ariz.	2	-	11	-	7,075	9,593	10	3	3	2	-	-
Utah	10	-	5	2	1,314	1,631	2	3	-	-	-	1
Nev.	-	-	4	-	4,449	5,464	2	4	-	-	1	-
PACIFIC	53	30	166	6	110,968	130,668	107	71	10	31	-	106
Wash.	4	1	11	-	9,493	10,970	2	7	-	3	-	8
Oreg.	1	-	3	-	6,599	7,744	17	4	-	-	-	1
Calif.	34	28	139	6	89,886	105,980	82	56	10	28	-	68
Alaska	1	1	9	-	2,850	3,390	1	2	-	-	-	1
Hawaii	13	-	4	-	2,140	2,584	5	2	-	-	-	28
Guam	U	-	-	-	97	96	U	U	U	U	U	-
P.R.	1	-	1	3	2,268	2,694	12	8	-	3	-	1
V.I.	U	-	-	-	195	193	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	297	364	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 30, 1982 and October 31, 1981 (43rd week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum 1982	1982	Cum 1982	Cum 1981	1982	Cum 1982	1982	Cum 1982	1982	1982	Cum 1982	Cum 1981
UNITED STATES	16	883	44	1,491	2,739	42	2,420	46	4,492	137	16	2,108	1,865
NEW ENGLAND	-	43	-	15	83	-	127	3	186	-	-	20	119
Maine	-	-	-	-	5	-	9	-	41	-	-	-	33
N.H.	-	2	-	3	6	-	15	1	17	-	-	10	51
Vt	-	-	-	2	3	-	9	-	7	-	-	-	-
Mass	-	24	-	4	59	-	32	-	86	-	-	5	23
R.I.	-	3	-	-	-	-	16	1	16	-	-	1	-
Conn	-	14	-	6	10	-	46	1	19	-	-	4	12
MID. ATLANTIC	2	146	1	166	866	8	432	7	293	110	-	102	222
Upstate N.Y.	-	27	1	116	210	2	150	3	75	99	-	49	107
N.Y. City	U	55	U	42	88	U	82	U	47	U	U	34	55
N.J.	-	31	-	4	58	2	87	1	43	-	-	18	47
Pa	2	33	-	4	510	4	113	3	128	11	-	1	13
E.N. CENTRAL	-	79	-	77	81	8	302	12	2,268	5	3	184	387
Ohio	-	12	-	1	16	3	108	2	1,594	2	-	-	3
Ind	U	3	U	2	9	U	29	U	37	U	U	28	132
Ill	-	34	-	24	23	1	76	2	193	2	1	68	98
Mich	-	26	-	50	30	4	72	7	330	-	-	49	34
Wis	-	4	-	-	3	-	17	1	114	1	2	39	120
W.N. CENTRAL	2	22	-	49	10	5	116	2	580	-	-	59	78
Minn	-	2	-	-	3	1	30	-	443	-	-	5	7
Iowa	-	7	-	-	1	1	12	-	34	-	-	-	4
Mo	1	6	-	2	1	-	29	-	18	-	-	38	2
N. Dak	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak	-	-	-	-	-	1	6	-	1	-	-	1	
Nebr	-	3	-	3	4	-	13	-	-	-	-	-	1
Kans	1	3	-	44	1	2	20	2	84	-	-	15	64
S. ATLANTIC	2	123	29	110	445	3	508	6	276	14	2	84	137
Del	-	4	-	-	-	-	-	-	13	-	-	1	1
Md	-	19	-	3	5	-	34	1	30	11	-	34	1
D.C.	-	4	-	1	1	-	4	-	-	-	-	-	-
Va	-	39	-	14	9	2	61	1	38	1	-	13	6
W. Va	U	7	U	3	9	U	9	U	94	U	U	1	22
N.C.	1	7	-	1	3	1	100	3	19	1	-	1	5
S.C.	-	4	-	-	2	-	60	-	17	-	-	1	8
Ga	1	16	-	-	111	-	101	1	19	-	1	15	37
Fla	-	23	29	88	305	-	139	-	46	1	1	18	57
E.S. CENTRAL	-	9	-	9	5	2	148	5	57	-	-	46	36
Ky	-	5	-	1	1	-	25	-	18	-	-	28	22
Tenn	-	-	-	6	2	-	64	5	24	-	-	2	13
Ala	-	1	-	2	2	2	48	-	9	-	-	-	1
Miss	-	3	-	-	-	-	11	-	6	-	-	16	-
W.S. CENTRAL	-	61	3	152	866	5	287	3	211	2	4	115	168
Ark	-	4	-	-	22	-	14	-	7	-	-	1	3
La	-	5	-	2	4	1	61	-	6	-	-	1	9
Okla	-	8	-	30	6	-	27	-	-	-	-	3	2
Tex	-	44	3	120	834	4	185	3	198	2	4	110	154
MOUNTAIN	2	29	5	28	35	2	106	1	100	3	-	78	94
Mont	-	1	-	-	-	1	5	1	4	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo	-	-	-	1	1	-	5	-	2	-	-	7	12
Colo	1	12	-	7	10	-	44	-	16	-	-	6	30
N. Mex	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz	-	7	2	17	5	1	19	-	47	-	-	14	21
Utah	1	4	3	3	-	-	9	-	20	3	-	22	8
Nev	-	-	-	-	10	-	2	-	7	-	-	12	11
PACIFIC	8	371	6	885	348	9	394	7	521	3	7	1,421	624
Wash	1	21	1	42	3	2	48	2	68	1	-	38	90
Oreg	-	14	-	23	5	3	74	-	-	-	-	6	53
Calif	7	331	5	814	333	4	257	5	427	2	6	1,363	465
Alaska	-	1	-	1	-	-	11	-	10	-	-	5	1
Hawaii	-	4	-	5	7	-	4	-	16	-	1	9	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	5	132	285	-	8	-	78	-	-	11	4
V.I.	U	-	U	-	24	U	-	U	3	U	U	-	1
Pac. Trust Terr	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 30, 1982 and October 31, 1981 (43rd week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies Animal
	Cum 1982	Cum 1981	1982	Cum 1982	Cum 1982	1982	Cum 1982	1982	Cum 1982	Cum 1982
UNITED STATES	27,127	25,464	440	21,139	220	5	333	4	945	5,203
NEW ENGLAND	488	489	19	592	6	-	17	-	10	40
Maine	7	5	2	51	-	-	-	-	-	26
N.H.	1	12	-	20	-	-	-	-	1	1
Vt.	2	15	-	13	-	-	2	-	-	1
Mass.	328	313	12	375	6	-	13	-	5	6
R.I.	21	30	-	25	-	-	-	-	2	-
Conn.	129	114	5	108	-	-	2	-	2	6
MID. ATLANTIC	3,639	3,671	49	3,533	7	-	59	-	43	184
Upstate N.Y.	378	356	13	615	7	-	9	-	15	99
N.Y. City	2,141	2,192	U	1,326	-	U	31	U	3	-
N.J.	530	521	21	702	-	-	11	-	13	17
Pa.	590	602	15	890	-	-	8	-	12	68
E.N. CENTRAL	1,524	1,917	60	3,192	1	1	30	1	83	535
Ohio	259	262	12	536	-	-	11	1	77	75
Ind.	167	242	U	391	-	U	2	U	-	70
Ill.	774	1,039	24	1,372	-	-	5	-	6	275
Mich.	241	307	16	718	-	1	9	-	-	6
Wis.	83	77	8	175	1	-	3	-	-	109
W.N. CENTRAL	462	565	14	623	33	-	16	1	34	1,070
Minn.	105	171	1	107	-	-	8	-	-	182
Iowa	27	24	3	66	2	-	1	-	4	347
Mo.	260	319	6	301	21	-	4	1	12	109
N. Dak.	7	9	1	13	-	-	-	-	-	90
S. Dak.	2	2	-	27	1	-	-	-	4	88
Nebr.	14	9	-	26	4	-	2	-	2	114
Kans.	47	31	3	83	5	-	1	-	12	140
S. ATLANTIC	7,487	6,801	128	4,404	12	1	40	1	507	1,001
Del.	20	13	2	40	-	-	-	-	-	2
Md.	395	489	14	507	1	-	9	-	49	53
D.C.	401	553	28	208	-	-	-	-	-	-
Va.	509	588	3	475	4	-	3	-	72	545
W. Va.	25	22	U	132	-	U	4	U	8	38
N.C.	609	531	3	670	-	-	2	1	218	65
S.C.	467	477	12	421	6	-	3	-	106	55
Ga.	1,557	1,686	37	710	-	-	-	-	50	179
Fla.	3,504	2,442	29	1,241	1	1	19	-	5	64
E.S. CENTRAL	1,895	1,656	40	1,941	8	-	19	-	88	581
Ky.	114	91	9	514	-	-	4	-	1	121
Tenn.	540	606	18	632	6	-	3	-	56	322
Ala.	704	480	10	520	-	-	9	-	15	131
Miss.	537	479	3	275	2	-	3	-	16	7
W.S. CENTRAL	7,095	6,091	55	2,567	113	1	34	1	161	1,000
Ark.	177	127	13	303	67	-	5	-	28	140
La.	1,606	1,372	18	384	3	-	3	-	2	31
Okla.	154	146	-	279	33	-	3	-	75	172
Tex.	5,158	4,446	24	1,601	10	1	23	1	56	657
MOUNTAIN	701	642	9	589	30	-	13	-	13	262
Mont.	5	11	-	37	4	-	-	-	4	84
Idaho	25	18	-	28	1	-	-	-	4	10
Wyo.	16	14	-	6	5	-	-	-	1	21
Colo.	182	190	-	72	7	-	3	-	1	47
N. Mex.	167	113	2	101	2	-	-	-	1	23
Ariz.	191	158	6	246	-	-	7	-	-	55
Utah	20	25	1	40	11	-	2	-	-	18
Nev.	95	113	-	59	-	-	1	-	2	4
PACIFIC	3,836	3,632	66	3,698	10	2	105	-	6	530
Wash.	128	158	1	231	1	-	6	-	-	8
Oreg.	93	97	9	154	2	-	4	-	1	3
Calif.	3,507	3,305	51	3,003	6	2	91	-	5	439
Alaska	14	11	-	74	1	-	1	-	-	80
Hawaii	94	61	5	236	-	-	3	-	-	-
Guam	1	-	U	36	-	U	-	U	-	-
P.R.	672	554	-	352	-	-	2	-	-	45
V.I.	21	16	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending October 30, 1982 (43rd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	650	466	131	28	13	11	40
Boston, Mass	185	119	43	15	3	5	12
Bridgeport, Conn	48	38	8	2	-	-	4
Cambridge, Mass	22	18	4	-	-	-	5
Fall River, Mass	33	26	5	1	1	-	-
Hartford, Conn	64	35	18	5	3	3	1
Lowell, Mass	32	24	6	1	-	-	1
Lynn, Mass	16	13	1	-	2	-	1
New Bedford, Mass	32	24	7	-	-	1	1
New Haven, Conn	30	26	3	1	-	-	-
Providence, R I	46	37	8	1	-	-	4
Somerville, Mass	7	6	1	-	-	-	1
Springfield, Mass	37	26	8	1	2	-	2
Waterbury, Conn	38	31	7	-	-	-	3
Worcester, Mass	60	43	12	1	2	2	5
MID ATLANTIC	2,606	2,046	326	83	62	67	100
Albany, N Y	46	31	11	1	1	2	-
Allentown, Pa	22	19	3	-	-	-	-
Buffalo, N Y	146	93	39	5	2	7	9
Camden, N J	44	29	14	-	1	-	1
Elizabeth, N J §	24	22	-	1	-	1	-
Erie, Pa †	33	18	11	2	1	1	1
Jersey City, N J	65	41	18	3	1	2	2
N Y City, N Y §	1,363	1,241	9	22	35	31	39
Newark, N J	64	27	22	8	5	2	6
Paterson, N J	30	18	7	2	2	1	2
Philadelphia, Pa †	290	181	77	20	6	6	16
Pittsburgh, Pa †	79	37	29	8	-	5	1
Reading, Pa	35	27	5	1	1	1	2
Rochester, N Y	136	99	29	4	3	1	7
Schenectady, N Y	33	21	11	1	-	-	2
Scranton, Pa †	26	18	8	-	-	-	2
Syracuse, N Y	86	55	20	2	3	6	1
Trenton, N J	31	19	8	2	1	1	1
Utica, N Y	24	21	3	-	-	-	2
Yonkers, N Y	32	29	2	1	-	-	6
E N CENTRAL	2,300	1,482	562	110	57	87	86
Akron, Ohio	59	43	9	4	2	1	-
Canton, Ohio	49	33	12	2	2	-	2
Chicago, Ill	466	278	139	21	9	19	9
Cincinnati, Ohio	159	108	33	5	4	9	12
Cleveland, Ohio	202	116	58	14	5	8	1
Columbus, Ohio	135	79	40	9	3	4	4
Dayton, Ohio	122	69	44	4	3	2	1
Detroit, Mich	241	130	66	20	9	16	2
Evansville, Ind	64	42	14	5	1	2	5
Fort Wayne, Ind §	52	49	-	1	1	1	1
Gary, Ind	15	11	3	-	1	-	-
Grand Rapids, Mich	81	61	13	3	3	1	6
Indianapolis, Ind	163	105	37	10	5	5	2
Madison, Wis	30	21	5	1	3	-	1
Milwaukee, Wis	132	99	24	2	3	4	5
Peoria, Ill	41	28	7	2	1	3	3
Rockford, Ill	43	32	8	2	-	1	3
South Bend, Ind	51	34	12	1	1	3	4
Toledo, Ohio	135	100	26	3	-	6	2
Youngstown, Ohio	60	44	12	1	1	2	3
W N CENTRAL	752	522	138	43	25	24	35
Des Moines, Iowa	44	31	7	5	-	1	5
Duluth, Minn	32	27	2	3	-	-	1
Kansas City, Kans	34	22	5	2	2	3	-
Kansas City, Mo	125	75	37	6	2	5	-
Lincoln, Nebr	24	16	7	-	1	-	3
Minneapolis, Minn	107	84	11	4	3	5	2
Omaha, Nebr	95	64	19	5	5	2	12
St Louis, Mo	163	109	28	11	8	7	8
St Paul, Minn	67	53	11	2	1	-	2
Wichita, Kans	61	41	11	5	3	1	2
S ATLANTIC	1,221	722	306	94	43	56	30
Atlanta, Ga	148	88	42	10	3	5	3
Baltimore, Md	265	169	54	26	12	4	2
Charlotte, N C	57	35	10	7	3	2	2
Jacksonville, Fla	103	59	27	10	1	6	-
Miami, Fla	118	68	36	7	2	5	2
Norfolk, Va	65	34	17	3	3	8	2
Richmond, Va	90	44	31	7	3	5	4
Savannah, Ga	40	17	16	2	4	1	2
St Petersburg, Fla	77	66	8	-	2	1	2
Tampa, Fla	59	32	9	5	5	8	2
Washington, D C	144	74	42	15	3	10	3
Wilmington, Del	55	36	14	2	2	1	6
E S CENTRAL	728	447	188	39	26	28	33
Birmingham, Ala	111	60	34	6	3	8	2
Chattanooga, Tenn	53	37	12	2	2	-	8
Knoxville, Tenn	40	31	8	1	-	-	1
Louisville, Ky	85	48	23	10	3	1	4
Memphis, Tenn	174	112	42	11	7	2	5
Mobile, Ala	85	46	24	6	3	6	3
Montgomery, Ala	54	33	13	1	2	5	2
Nashville, Tenn	126	80	32	2	6	6	8
W S CENTRAL	1,560	877	390	145	81	67	49
Austin, Tex	62	41	9	7	4	1	1
Baton Rouge, La	48	37	10	-	-	1	3
Corpus Christi, Tex	55	30	11	6	3	5	2
Dallas, Tex	202	121	49	17	11	4	2
El Paso, Tex	48	25	13	4	4	2	1
Fort Worth, Tex	81	48	25	2	-	6	5
Houston, Tex	543	254	154	73	37	25	18
Little Rock, Ark	86	47	28	5	1	5	9
New Orleans, La	116	75	24	7	9	1	-
San Antonio, Tex	184	118	34	14	6	12	4
Shreveport, La	48	26	14	3	4	1	2
Tulsa, Okla	87	55	19	7	2	4	2
MOUNTAIN	622	424	117	33	25	22	25
Albuquerque, N Mex	106	60	27	6	12	1	3
Colo Springs, Colo	28	15	6	3	1	3	3
Denver, Colo §	127	110	1	6	2	7	5
Las Vegas, Nev	73	49	15	6	2	1	2
Ogden, Utah	14	7	4	1	1	1	1
Phoenix, Ariz	110	74	26	3	4	3	1
Pueblo, Colo	24	18	5	1	-	-	2
Salt Lake City, Utah	53	33	14	1	-	5	2
Tucson, Ariz	87	58	19	6	3	1	6
PACIFIC	1,923	1,248	405	131	81	58	115
Berkeley, Calif	15	12	1	1	1	-	-
Fresno, Calif	87	54	21	6	1	5	5
Glendale, Calif	25	17	3	2	2	1	1
Honolulu, Hawaii	56	29	12	5	8	2	3
Long Beach, Calif	92	58	23	8	1	2	3
Los Angeles, Calif	618	395	126	51	31	15	29
Oakland, Calif	86	52	21	8	2	3	4
Pasadena, Calif	21	13	6	1	-	1	2
Portland, Oreg	104	71	23	2	4	4	9
Sacramento, Calif	73	47	18	1	5	2	7
San Diego, Calif	172	105	34	16	7	10	15
San Francisco, Calif	158	99	38	12	4	5	3
San Jose, Calif	157	103	30	11	10	3	23
Seattle, Wash	168	128	30	5	2	3	4
Spokane, Wash	53	36	11	2	3	2	6
Tacoma, Wash	38	30	8	-	-	-	1
TOTAL	12,365††	8,234	2,563	706	413	420	493

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

E. coli 0157:H7 — Continued

stools and 24 of the remaining 25 patients with sporadic cases had eaten hamburgers from a variety of sources (including homes and/or local or national-chain restaurants) within the week before they became ill.

Examination of stool samples from sporadic cases of this recently recognized diarrheal illness, currently designated "hemorrhagic colitis," began at CDC after *E. coli* 0157:H7 was isolated from patients in two separate outbreaks of this illness earlier this year in Oregon and Michigan. Illness was associated with eating hamburgers at restaurants of one national chain.

Hemorrhagic colitis appears to be a distinct clinical entity, characterized by severe crampy abdominal pain, grossly bloody diarrhea, little or no fever, a characteristic barium-enema finding of marked edema involving the cecum, ascending and/or transverse colon, and the absence of usual pathogens in stool.

Reported by RR Uyeyama, MD, Good Samaritan Hospital, San Jose, SB Werner, MD, S Chin, MD, State Epidemiologist, California Dept of Health Svcs; SF Pearce, MD, CL Kollip, MD, Portland Adventist Medical Center, Portland, LP Williams, DVM, JA Googins, MD, State Epidemiologist, Oregon State Health Div; Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The diagnoses of hemorrhagic colitis are based on the typical clinical presentation and isolation of *E. coli* 0157:H7 from the stool specimens. Early stool collection (within 4 days after onset of illness and before any antibiotic exposure) is crucial for detecting the *E. coli*, so physicians encountering typical cases need to ensure that stool samples are obtained and a portion held frozen (preferably at -70 C [-94 F] or on dry ice) while their laboratories perform routine examinations for *Salmonella, Shigella, Campylobacter, Yersinia*, and parasites. If these test results are negative, arrangements can be made through the state epidemiologist and state laboratory director to look for *E. coli* 0157:H7 in the frozen specimen. Those state laboratories that do not have the antisera to identify *E. coli* 0157:H7 may wish to send either the whole frozen stool or 10 picks (if possible) of *E. coli* colonies to CDC. This strain of *E. coli* 0157:H7 does not ferment sorbitol, and this biochemical property may facilitate screening for this serotype. Further studies are under way at CDC to better characterize the epidemiology of hemorrhagic colitis, the reservoir of *E. coli* 0157:H7, and serologic methods to confirm infection.

Epidemiologic investigation of the outbreaks showed that one source of *E. coli* 0157:H7 is hamburger. Other enteric diseases, such as salmonellosis, have been reported following consumption of hamburger (*1*). Careful handling and adequate cooking of raw meat products should minimize or eliminate the risk of contracting infectious diseases from this source.

Reference

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Current Trends

Subacute Sclerosing Panencephalitis Surveillance — United States

Subacute sclerosing panencephalitis (SSPE) is a slow-virus infection of the central nervous system associated with prior measles infection. Onset generally occurs in late childhood or adolescence and is usually characterized by the insidious onset of mental deterioration and myoclonia. Although spontaneous improvement or stabilization can occur, the vast majority of patients proceed over a period of months to years to generalized convulsions, dementia, coma, and death.

To collect demographic and clinical information on SSPE cases, a national SSPE registry

Subacute sclerosing panencephalitis – Continued

was initiated in 1969 at the University of Tennessee. Since October 1980, responsibility for the registry has resided with the Medical College of Georgia.* The registry is supported by the Office of Biologics, Food and Drug Administration, and maintained in collaboration with CDC.

A case of SSPE is defined by CDC as an illness with a compatible clinical course plus one of the following items of supporting laboratory evidence: 1) measles antibody detected in the cerebrospinal fluid (CSF), 2) a characteristic pattern on electroencephalography, or 3) typical histologic findings in brain biopsy material or tissue obtained on postmortem examination.

As of July 1982, 634 individuals suspected of having SSPE, with onset from 1956-1981, had been reported to the registry; of these, 368 were U.S. citizens who met the case definition of SSPE and had onset of symptoms between 1969 and 1981 (Figure 1). Fifty-five percent (202) of the 368 confirmed cases had a history of only measles infection; 14% (51) had a history of only measles vaccination; and 17% (63) had a history of both, with the natural illness most frequently preceding the vaccination. The remaining 14% (52) gave no positive history of having natural measles infection or measles vaccination.

The reported incidence rate among U.S. citizens under 20 years of age has been estimated for selected years (by year of onset of SSPE). The rate for 1970 is estimated at 0.61 per million population, decreasing to 0.35 in 1975 and 0.06 in 1980.

A crude estimate can be made of the risk of SSPE following natural measles infection by determining the year in which a given person who developed SSPE contracted measles and the number of measles cases that occurred in that year.† Similarly, the risk, if any, associated with measles vaccine can be estimated by determining the year of vaccination of patients with SSPE and the net number of doses of live-virus measles vaccine distributed during that year. The estimated risk of SSPE following natural measles infection averaged 8.5 cases per million measles cases occurring in 1960-1974.§ The estimated rate of SSPE following mea-

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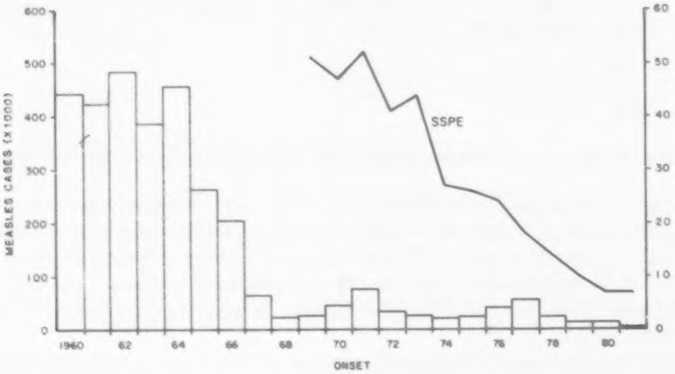
*Inquiries and suspected case reports can be directed to Dr. Paul R. Dyken, Professor and Chief, Section of Pediatric Neurology, Medical College of Georgia, 1459 Laney-Walker Boulevard, Augusta GA 30912.

†Assuming a 10% reporting efficiency, estimated case numbers were determined by multiplying reported cases for those years by 10.

§The average interval between onset of measles and onset of SSPE is approximately 7 years. Thus, SSPE risk estimates for persons who developed measles beyond 1974 are less likely to be accurate.

FIGURE 1. Confirmed subacute sclerosing panencephalitis (SSPE) and reported measles cases by year of onset — United States



Subacute sclerosing panencephalitis – Continued

sles vaccination averaged 0.7 reported SSPE cases per million doses of live-virus measles vaccine distributed from 1963 (the year of vaccine licensure) through 1974.

Reported by P Dyken, MD, R DuRant, P Shmunes, Medical College of Georgia, Augusta, GA; Surveillance, Investigations, and Research Br, Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: Reported SSPE cases with onset since 1973 have declined substantially paralleling the substantial decline in reported measles cases after 1964-1966 (Figure 1). The lag period between the decline in reported measles cases and the decline in reported SSPE cases is similar to the mean latent period of 7 years noted previously between natural measles infection and subsequent onset of SSPE (*1*). Recently reported cases have a mean latent period of approximately 10 years, indicating that many of these cases may reflect sequelae due to measles incidence from the 1960s and early 1970s.

There is often a several-year lag period between onset of SSPE and registry notification (median = 3 years). Reporting is probably not complete, in part because diagnosing the illness requires a high index of suspicion. However, surveillance efforts have increased during the past 2 years from the immediately preceeding years (e.g. by continually soliciting reports from pediatric neurologists). Therefore, the apparent decrease in case reports since 1973 is probably an accurate trend, but the apparent annual case report level since approximately 1980 must also be viewed with consideration of these factors. Because of the lag time between natural measles illness and SSPE onset and the current lag time between onset and reporting, the impact on SSPE incidence of the dramatic decline in measles incidence as a result of the measles elimination effort will not be seen for nearly another decade.

Four lines of evidence indicate that measles vaccine protects against SSPE: 1) the decrease in reported SSPE cases in recent years as measles incidence has declined; 2) two case-control studies performed in the United States which indicated that measles vaccine, by protecting against measles, reduces the chance of developing SSPE (*2,3*); 3) a cohort analysis of children born from 1953 to 1973 indicating that, for cohorts born since 1966, one of the first years of widespread use of measles vaccine, the incidence rate of SSPE occurring at all ages has progressively decreased (*4*); 4) estimates of the ratios of SSPE cases to measles cases and of SSPE cases to measles vaccinees suggest that if there is any risk of SSPE following measles vaccination, it is ≤ one-twelfth the risk of SSPE following measles infection. Although some cases of SSPE have developed among children who had no history of natural measles infection but who received measles vaccine, these patients may have had unrecognized measles illness (e.g., during the first year of life). Studies performed before measles vaccine licensure indicated that 15%-30% of persons without a history of measles illness had evidence of measles antibody (*5*). A better picture of the etiologic role of live-measles vaccine in SSPE occurrence will only be seen several years after interruption of measles transmission in this country. Based on current imperfect estimates, however, the risk, if any, of SSPE from vaccination seems extremely low.

SSPE is only one of a number of degenerative neurologic diseases. In such illnesses, testing for measles antibody in the CSF will allow the diagnosis of SSPE when applicable. In order to obtain as complete reporting as possible, health-care providers and public health personnel are encouraged to report all suspected cases to the registry.

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Subacute sclerosing panencephalitis — Continued

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Epidemiologic Notes and Reports

Influenza — Alaska

Nine influenza viruses, which, in preliminary hemagglutination-inhibition testing, appear antigenically related to A/Bangkok/1/79(H3N2), were isolated in Alaska between September 25 and October 25, 1982. These isolations are the first reported in the United States for the 1982-1983 season. One virus was isolated in Anchorage, the rest in Fairbanks; several isolates were from children <1 year old. School absenteeism in Fairbanks has not increased, but increases in influenza-like illness have been reported in nursery schools and kindergartens.

Reported by D Ritter, Northern Region Laboratories, Section of Laboratories, J Middaugh, MD, State Epidemiologist, Alaska State Dept of Health and Social Svcs; Influenza Br, Center for Infectious Diseases, CDC.

Erratum, Vol. 31, No. 42

p. 565. In the article, "Valproic Acid and Spina Bifida: A Preliminary Report—France," the p-value in Table 2 on p. 266 should read: 0.00098.

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MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Cryptosporidiosis: Assessment of Chemotherapy of Males with Acquired Immune Deficiency Syndrome (AIDS)

Since December 1979, 21 males with severe, protracted diarrhea caused by the parasite, *Cryptosporidium*, have been reported to CDC by physicians in Boston, Los Angeles, Newark, New York, Philadelphia, and San Fransisco. All 21 have acquired immune deficiency syndrome (AIDS); 20 are homosexual; and one is a heterosexual Haitian. Their ages range from 23 to 62 years with a mean of 35.7 years. Most had other opportunistic infections or Kaposi's sarcoma in addition to cryptosporidiosis. Eleven had *Pneumocystis carinii* pneumonia (PCP); nine had Candida esophagitis; two had a disseminated *Mycobacterium avium-intracellulare* infection; one had a disseminated cytomegalovirus infection; and two had Kaposi's sarcoma. T-lymphocyte helper-to-suppressor ratios were decreased (< 0.9) in all 18 patients on whom this test was performed. Fourteen patients have died.

The illness attributed to *Cryptosporidium* was characterized by chronic, profuse, watery diarrhea. The mean duration of diarrhea was 4 months, often continuing until the patient's death. Bowel movement frequency ranged from six to 25 per day. The estimated maximum volume of stool during illness ranged from 1 to 17 liters per day with a mean of 3.6 liters per day. Diagnosis of cryptosporidiosis was made by histologic examination of small bowel biopsies (13 patients) or large bowel biopsies (four patients), or by stool examination using a sucrose concentration technique (16 patients) (*1*). More than one type of diagnostic method was positive for several patients.

Table 1 shows the drugs given to the 21 patients while they had diarrhea attributed to *Cryptosporidium*. Only two patients (9.5%) have had sustained resolution of their diarrhea with negative follow-up stool examinations. The first was being treated with prednisone (60 mg daily) for chronic active hepatitis at the time his diarrhea began. When cryptosporidiosis was diagnosed, he was started on diloxanide furoate (500 mg three times daily for 10 days), and the prednisone was tapered over 2 weeks and then stopped. Two weeks later, his diarrhea was improving; in another 2 weeks, his diarrhea had completely resolved. He has had no diarrhea for 8 months. Follow-up stool examinations 2 weeks and 6 weeks after discontinuation of diloxanide furoate were negative for *Cryptosporidium*.

The second patient, who also had a clinical and parasitologic response, subsequently died of PCP. In early February 1982, 6 months before his death, he had onset of watery diarrhea, and a small bowel biopsy showed *Cryptosporidium*. Treatment with furazolidone (100 mg four times a day) was initiated on May 5, and within 6 days, the patient had gained 1.1 kilograms (2.4 pounds); parenteral nutrition was discontinued, although he continued to produce a liter of watery stool each day. Ten days after treatment was started, his stools became formed for the first time in 4 months, but *Cryptosporidium* oocysts were still present. Furazolidone was increased to 150 mg four times daily. Twenty days after therapy was started (10

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Cryptosporidiosis – Continued

days after the higher dose of furazolidone was begun), the patient had one bowel movement a day, but his stool was still positive for *Cryptosporidium* and remained positive despite continued use of furazolidone at 150 mg four times daily for a total of 2 months. At that time, two stool examinations failed to detect oocysts, and the furazolidone was stopped. One week later, the patient developed PCP; despite treatment with trimethoprim-sulfamethoxazole, he died 2 weeks later on July 22. An autopsy was not permitted.

After various treatment regimens, seven patients have had partial or transitory decreases in their diarrhea. Two received no anti-parasitic drugs. A third patient temporarily improved after treatment with furazolidone (100 mg orally four times a day for 7 days), although 2 weeks elapsed between the end of treatment with furazolidone and the onset of clinical improvement. The patient's diarrhea abated, but follow-up stool examinations remained posi-

TABLE 1. Drugs used to treat males with cryptosporidiosis and AIDS

Drug[*]	Dose and route of administration[†]	Number of patients	Unchanged		Improved[§]		Cured[¶]	
			n	(%)	n	(%)	n	(%)
No treatment	—	2	0	(0.0)	2	(100.0)	0	(0.0)
Trimethoprim/ sulfamethoxazole	25 mg/kg QID of sulfamethoxazole	7	7	(100.0)	0	(0.0)	0	(0.0)
Trimethoprim/ sulfamethoxazole	800 mg PO BID of sulfamethoxazole	4	4	(100.0)	0	(0.0)	0	(0.0)
Furazolidone	100 mg PO QID	6	4	(66.7)	1	(16.7)	1	(16.7)
Furazolidone	300 mg PO QID	1	1	(100.0)	0	(0.0)	0	(0.0)
Metronidazole	750 mg PO TID	5	4	(80.0)	1	(20.0)	0	(0.0)
Metronidazole	750 mg IV TID	1	0	(0.0)	1	(100.0)	0	(0.0)
Pyrimethamine/ sulfa	25 mg PO per day of pyrimethamine	4	4	(100.0)	0	(0.0)	0	(0.0)
Diloxanide furoate	500 mg PO TID	3	2	(66.7)	0	(0.0)	1[**]	(33.3)
Quinacrine	100 mg PO TID	3	3	(100.0)	0	(0.0)	0	(0.0)
Diiodohydroxyquin	650 mg PO TID	2	2	(100.0)	0	(0.0)	0	(0.0)
Tetracycline	500 mg PO QID	3	1	(33.3)	2	(66.6)	0	(0.0)
Doxycycline	100 mg PO per day	2	2	(100.0)	0	(0.0)	0	(0.0)
Pentamidine	4 mg/kg IM per day	2	2	(100.0)	0	(0.0)	0	(0.0)
Chloroquine/ primaquine	500 mg PO per day of chloroquine	1	1	(100.0)	0	(0.0)	0	(0.0)

[*] Some patients received more than one drug.

[†] BID = twice daily; TID = three times daily; QID = four times daily; PO = orally; IV = intravenously

[§] Decrease in number of stools by at least 50%.

[¶] Absence of diarrhea for more than 2 weeks and stool examination negative for *Cryptosporidium*.

[**] Improvement temporally related to stopping prednisone.

Cryptosporidiosis – Continued

tive for *Cryptosporidium*. Three months after furazolidone therapy, he again developed diarrhea, and his stools were positive for *Cryptosporidium*. Two patients had less diarrhea when given tetracycline. The first received tetracycline 500 mg orally four times a day for 4 months. His diarrhea decreased from 12 watery stools to three loose stools per day, but stool examination after 4 months of therapy still showed *Cryptosporidium*. The second patient, given the same treatment, also had a reduction in the number of stools. When the drug was discontinued, his diarrhea again increased.

Two patients' diarrhea stopped following treatment with opiates and metronidazole, given orally in one case and intravenously in the other. Neither patient had diarrhea after a few days of treatment, but both died within 1 week, and autopsies were not allowed. The first patient died from suspected peritonitis; the second died with disseminated Kaposi's sarcoma and pneumonia.

The remaining 12 patients have had continuous, severe diarrhea. In addition to the drugs listed in Table 1, bovine-transfer factor has been given to one patient and intravenous gamma globulin to two patients; neither was effective. At present, 14 (66.7%) of the 21 individuals have died, and six are alive with persistent diarrhea. In no instance was cryptosporidiosis thought to be the direct cause of death, but the associated severe malnutrition was often considered a contributing factor.

Shortly before cryptosporidiosis was recognized in AIDS patients, investigators at the U.S Department of Agriculture National Animal Disease Center (NADC) began testing drugs for efficacy against *Cryptosporidium* in animals; results of these initial studies were published in February, 1982 (*2*). More recently, five additional drugs have been evaluated at the NADC. Calves or pigs up to 14 days old without infection were given the drugs orally twice daily. One day after the drugs were started, each animal received a single oral inoculation of *Cryptosporidium*. The following drugs (with doses in mg/kg/day) were tested: amprolium (10.7), difluoromethylornithine (1250) plus bleomycin (6 IM), diloxanide furoate (125.0), dimetridazole (19.0), ipronidazole (23.8), lasalocid (0.7), metronidazole (23.8), monensin (4.8), oxytetracycline (50.0), pentamidine (10.0), quinacrine (11.9), salinomycin (6.0), sulfaquinoxaline (200.0), sulfadimidine (119.0), and trimethoprim (4.8) plus sulfadiazine (23.8). Although small numbers of animals were tested in each treatment group, no drugs prevented fecal shedding of oocysts or reduced the number of *Cryptosporidium* seen on intestinal biopsies.

Reported by J Goldfarb, MD, H Tanowitz, MD, Albert Einstein College of Medicine, Bronx, R Grossman, MD, Medical Arts Center Hospital, C Bonanno, MD, D Kaufman, MD, P Ma, PhD, St. Vincent's Medical Center, R Soave, MD, New York Hospital-Cornell Medical Center, D Armstrong, MD, J Gold, MD, Memorial Sloan-Kettering Cancer Center, S Dikman, MD, M Finkel, MD, H Sacks, MD, Mt. Sinai Medical Center, R Press, MD, New York University Medical Center, D William, MD, St. Luke's-Roosevelt Hospital, S Friedman, MD, New York City Dept of Health, R Rothenberg, MD, State Epidemiolgist, New York State Dept of Health; S Brown, MD, United Hospitals, Newark, WE Parkin, DVM, State Epidemiologist, New Jersey State Dept of Health; EJ Bergquist, MD, Thomas Jefferson University Hospital, Philadelphia, CW Hays, MD, State Epidemiologist, Pennsylvania State Dept of Health; P Forgacs, MD Lahey Clinic Medical Center, Burlington, L Weinstein, MD, Brigham and Women's Hospital, Boston, NJ Fiumara, MD, State Epidemiologist, Massachusetts State Dept of Public Health; D Busch, MD, San Francisco, M Derezin, MD, M Gottlieb, MD, J Matthew, MD, W Weinstein, MD, UCLA Center for Health Sciences, J Chin, MD, State Epidemiologist, California Dept of Health Svcs; H Moon, PhD, National Animal Disease Center, Ames, Iowa; AIDS Activity, Div of Parasitic Diseases, Center for Infectious Diseases, CDC.

Editorial Note: *Cryptosporidium* is a protozoan parasite; it is a well recognized cause of diarrhea in animals, especially calves, but has only rarely been associated with diarrhea in humans (*3*). Individuals with normal immune function who have developed cryptosporidiosis have

Cryptosporidiosis – Continued

self-limited diarrhea lasting 1-2 weeks, but immunosuppressed individuals have developed chronic diarrhea. An effective drug to treat cryptosporidiosis has not been identified, and the above reports are equally discouraging. Of seven patients who are still living, only one has no diarrhea at present. His recovery coincided with treatment with diloxanide furoate and discontinuation of prednisone. It seems unlikely that diloxanide furoate was responsible for his recovery, since three other patients who received the drug did not respond, and the drug was ineffective in experimentally infected pigs given nearly six times the recommended human dose. It is similarly difficult to be certain that improvement reported in other patients was due to the drugs they received because only a few patients receiving a drug responded, responses were brief, and the same or similar drugs were ineffective in preventing infection in experimental animals. The difficulty in interpreting isolated responses is underscored by the two patients who improved before any specific therapy began.

Since none of the drugs reported above appears clearly efficacious, additional tests of other anti-parasitic drugs in animals are needed. Until an effective drug for cryptosporidiosis is identified or the underlying immune deficiency in patients with AIDS becomes correctable, management of diarrhea due to cryptosporidiosis will continue to focus on supportive care.

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Rabies — Mid-Atlantic States

An increased number of rabies cases among wild raccoons has recently been reported from the mid-Atlantic states (Maryland, Pennsylvania, Virginia, West Virginia) (Table 2). The disease is primarily concentrated in an eight-county area encompassing northern Virginia, western Maryland, and southcentral Pennsylvania (Table 3). One case has also been reported in Washington, D.C.

A single raccoon from eastern West Virginia was reported rabid in 1977—the first case in the area. Rabid raccoons were reported from contiguous counties in Virginia and West Virginia during 1978-1980; since then, the outbreak has grown to encompass several adjacent counties in Maryland and Pennsylvania. Between January 1 and October 15, 1982, 432 rabid raccoons had been reported from Virginia, 35 from Maryland, 23 from Pennsylvania, and 15 from West Virginia. Rabies among dogs and cats has also been reported. The first case of

TABLE 2. Raccoon rabies – mid-Atlantic states

	1977	1978	1979	1980	1981	1982*
Maryland	0	0	0	0	7	35
Pennsylvania	0	0	0	0	0	23
Virginia	0	3	4	7	102	432
West Virginia	1	0	8	14	22	15
U.S. total				394	481	700

*Through October 15, 1982

Rabies – Continued

rabies in a raccoon in Washington, D. C., was reported on October 27, 1982. Within the raccoon-outbreak area, rabid skunks, bats, and foxes have been reported during the last 12 months (Table 4).

Reported by E Israel, MD, State Epidemiologist, Maryland State Dept of Health and Mental Hygiene; CW Hays, MD, State Epidemiologist, Pennsylvania State Dept of Health; GB Miller, Jr, MD, State Epidemiologist, Virginia State Dept of Health; LE Haddy, MS, State Epidemiologist, West Virginia State Dept of Health; ME Levy, MD, State Epidemiologist, District of Columbia Dept of Human Svcs; Viral and Rickettsial Zoonoses Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The pattern of rabies among raccoons in the mid-Atlantic states represents a significant departure from the pattern seen in the United States during the last 10 years. In most of the country, raccoon rabies occurs as sporadic, isolated cases. However, in the southeastern states—Alabama, Florida, Georgia, and South Carolina—raccoons are the major rabies reservoir, and raccoon rabies occurs as an enzootic or epizootic disease. As recently as 1980, 90% of all raccoon rabies in the United States was reported from these four states; Georgia alone reported 208 cases (53% of the total that year). So far in 1982, Virginia has reported 62% of all raccoon rabies in the United States. Thus, in a two-year span, Virginia has reported a > 60-fold increase in raccoon rabies.

Local, state, and federal health agencies are cooperating to study the spread of the outbreak by intensifying rabies surveillance activities in the affected areas. Health agencies are also cooperating to educate the public to the risk of exposure to wild animals in rabies-affected areas, to the necessity for keeping rabies immunizations for pet dogs and cats current, and to the importance of seeking medical attention if bitten or exposed to wild animals.

There is no known technique for effectively eliminating rabies in wildlife, but research concerning the understanding and control of the disease in wild animal populations is underway. No human rabies case has ever been known to result from a raccoon bite.

TABLE 3. Raccoon rabies by county, January 1-October 15, 1982 – mid-Atlantic states

MARYLAND		**VIRGINIA**	
Allegheny	25	Loudoun	212
Montgomery	5	Fairfax	138
Washington	5	Fauquier	34
Total	35	Prince William	33
		Culpeper	6
PENNSYLVANIA		Frederick	4
Bedford	17	Arlington	2
Bucks	2	Augusta	1
Montgomery	3	Rockingham	1
Sullivan	1	Madison	1
Total	23	Total	432

TABLE 4. Animal rabies, January 1-October 15, 1982 – Maryland, Virginia

	MARYLAND	VIRGINIA
Raccoons	35	432
Skunks	6	35
Bats	17	9
Foxes	1	11
Dogs	0	2
Cats	0	8
Other	1[*]	6[†]

[*] cow

[†] 5 groundhogs, 1 ferret

Perspectives in Disease Prevention and Health Promotion

Homicide — United States

In 1981, the Federal Bureau of Investigation's Uniform Crime Reporting System (FBI-UCR) estimated that 22,516 instances of homicide occurred in the United States (*1*).* The rate was 9.8 per 100,000 population, representing a 3.9% decrease from the 1980 homicide rate. An estimated 591,007 potential years of working life were lost in 1981 due to homicide (*2*).

From 1977 to 1980, the homicide rate gradually increased, but since the end of 1980, the trend has leveled off (*1*). As in previous years, the South experienced the highest homicide rate—13 homicides per 100,000 population. The West had a rate of 10/100,000, while the Northeast and the North Central region had homicide rates of approximately 8 and 7/100,000, respectively (*1*).

In 1981, the FBI-UCR estimated that 77% of homicide victims were male. Approximately 54% were white, 44% black, and 2% of other races. Fifty-nine percent were less than 35 years of age (*1*).

(Continued on page 600)

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*Homicide is defined as the willful (non-negligent) killing of one human being by another, but does not include justifiable homicide, which is the killing of a felon by law enforcement officers in the line of duty or by private citizens.

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		44th Week Ending			Cumulative, First 44 Weeks		
		November 6, 1982	November 7, 1981	Median 1977-1981	November 6, 1982	November 7, 1981	Median 1977-1981
Aseptic meningitis		260	211	211	7,624	8,243	6,580
Brucellosis		3	2	2	140	143	153
Encephalitis:	Primary (arthropod-borne & unspec.)	25	33	27	1,205	1,271	1,020
	Post-infectious	4	1	3	54	80	186
Gonorrhea:	Civilian	18,962	20,158	20,510	809,053	852,145	850,236
	Military	398	552	552	22,340	23,789	23,221
Hepatitis:	Type A	411	429	575	18,962	21,201	24,737
	Type B	416	387	340	18,026	17,264	13,889
	Non A, Non B	57	N	N	1,937	N	N
	Unspecified	148	192	192	7,482	9,136	8,752
Legionellosis		4	N	N	438	N	N
Leprosy		4	1	2	169	215	149
Malaria		9	26	17	895	1,210	645
Measles (rubeola)		8	14	89	1,499	2,753	13,104
Meningococcal infections:	Total	51	39	39	2,477	2,965	2,205
	Civilian	51	39	39	2,464	2,954	2,185
	Military	-	-	-	13	11	16
Mumps		71	96	176	4,562	3,751	12,017
Pertussis		29	21	34	1,415	1,060	1,456
Rubella (German measles)		27	18	46	2,138	1,883	11,053
Syphilis (Primary & Secondary):	Civilian	655	717	502	27,849	26,181	21,056
	Military	13	4	4	379	329	264
Tuberculosis		525	552	547	21,704	22,933	23,292
Tularemia		5	5	5	225	236	173
Typhoid fever		4	10	10	339	505	442
Typhus fever, tick-borne (RMSF)		9	10	8	947	1,144	1,080
Rabies, animal		112	105	75	5,327	6,341	4,376

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	4
Botulism	71	Paralytic	4
Cholera	-	Psittacosis (Ariz. 1)	103
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus	68
Leptospirosis (Ohio 1, Mo. 1, Fla. 2, Tex. 1, Hawaii 1)	61	Trichinosis (Md. 1)	78
Plague	18	Typhus fever, flea-borne (endemic, murine)	38

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 6, 1982 and November 7, 1981 (44th week)

Reporting Area	Aseptic Menin-gitis	Brucel-losis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	260	140	1,205	54	809,053	852,145	411	416	57	148	4	169
NEW ENGLAND	22	3	50	6	19,569	20,903	5	14	2	9	-	1
Maine	3	-	-	-	1,008	1,126	1	-	-	-	-	-
N.H.	3	-	8	-	644	762	1	-	-	-	-	-
Vt.	-	-	-	-	387	374	-	-	-	-	-	-
Mass.	3	-	20	-	8,767	8,821	1	5	1	9	-	-
R.I.	5	-	-	1	1,308	1,238	-	2	-	-	-	-
Conn.	8	3	22	5	7,475	8,582	2	7	1	-	-	1
MID. ATLANTIC	37	3	120	14	102,947	102,782	71	87	5	13	1	9
Upstate N.Y.	13	3	50	3	17,092	17,890	14	16	1	3	-	1
N.Y. City	6	-	17	-	41,915	42,040	17	23	-	3	-	6
N.J.	8	-	21	-	18,940	19,459	11	20	4	3	1	1
Pa.	10	-	32	11	25,000	23,393	29	28	-	4	-	1
E.N. CENTRAL	50	4	307	10	111,366	127,021	31	46	1	7	1	7
Ohio	25	1	116	4	30,893	39,942	17	21	1	5	1	-
Ind.	6	-	83	3	13,924	10,736	4	3	-	-	-	-
Ill.	1	2	15	1	28,578	36,735	3	2	-	1	-	6
Mich.	18	1	64	-	27,705	27,985	7	20	-	1	-	-
Wis.	-	-	29	2	10,266	11,623	-	-	-	-	-	1
W.N. CENTRAL	7	16	87	4	38,152	40,994	9	16	-	2	-	5
Minn.	-	1	27	1	5,554	6,515	2	1	-	-	-	3
Iowa	4	5	43	1	4,035	4,525	-	1	-	1	-	-
Mo.	1	4	7	-	18,145	18,962	-	5	-	1	-	1
N. Dak.	-	-	-	-	498	517	-	-	-	-	-	-
S. Dak.	-	1	-	1	1,009	1,098	-	-	-	-	-	1
Nebr.	2	2	5	-	2,306	3,040	-	5	-	-	-	-
Kans.	-	3	5	1	6,605	6,337	7	4	-	-	-	-
S. ATLANTIC	42	25	178	8	213,113	209,772	51	77	13	13	2	10
Del.	-	-	-	-	3,570	3,351	1	-	-	1	-	-
Md.	3	-	22	-	26,473	25,033	2	11	3	2	-	3
D.C.	-	-	-	-	12,899	11,841	-	-	-	-	-	-
Va.	2	8	35	1	17,077	19,249	-	8	2	2	-	1
W. Va.	1	-	16	-	2,368	3,157	2	2	1	-	-	-
N.C.	9	-	26	1	33,883	32,437	4	8	-	2	-	-
S.C.	1	2	2	-	20,582	20,383	7	7	-	1	-	-
Ga.	1	3	14	-	41,577	43,505	12	15	1	2	-	1
Fla.	25	12	63	6	54,684	50,816	23	26	6	3	2	5
E.S. CENTRAL	6	12	60	2	70,545	71,094	16	13	2	1	-	-
Ky.	-	-	1	-	9,499	8,806	5	2	1	-	-	-
Tenn.	3	7	27	-	27,863	26,839	6	6	1	-	-	-
Ala.	3	4	16	2	20,579	21,660	1	4	-	1	-	-
Miss.	-	1	16	-	12,604	13,789	4	1	-	-	-	-
W.S. CENTRAL	24	44	188	1	112,641	112,345	88	39	1	62	-	26
Ark.	-	7	16	-	9,105	8,515	-	4	-	4	-	-
La.	9	8	24	-	21,027	19,575	29	12	1	18	-	-
Okla.	4	7	35	-	12,275	12,247	9	8	-	5	-	-
Tex.	11	22	113	1	70,234	72,008	50	15	-	35	-	26
MOUNTAIN	19	3	41	3	27,576	33,468	28	23	7	8	-	2
Mont.	1	2	-	-	1,142	1,241	-	-	-	-	-	-
Idaho	3	1	-	-	1,324	1,499	1	2	-	-	-	1
Wyo.	-	-	-	-	832	861	1	1	-	-	-	-
Colo.	2	-	19	1	7,329	9,012	6	8	-	-	-	-
N. Mex.	1	-	1	-	3,777	3,726	4	3	-	-	-	-
Ariz.	-	-	11	-	7,275	9,871	12	4	5	7	-	-
Utah	12	-	5	2	1,342	1,665	3	3	1	-	-	1
Nev.	-	-	5	-	4,555	5,594	1	2	1	1	-	-
PACIFIC	53	30	174	6	113,144	133,766	112	101	26	33	-	109
Wash.	5	1	12	-	9,726	11,247	2	2	-	5	-	8
Oreg.	5	-	4	-	6,724	7,974	10	3	1	1	-	1
Calif.	40	28	144	6	91,607	108,478	99	90	25	27	-	69
Alaska	-	1	10	-	2,908	3,459	1	5	-	-	-	1
Hawaii	3	-	4	-	2,179	2,608	-	1	-	-	-	30
Guam	U	-	-	-	104	98	U	U	U	U	U	1
P.R.	-	-	1	3	2,268	2,758	-	-	-	-	-	1
V.I.	-	-	-	-	207	198	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	297	379	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 6, 1982 and November 7, 1981 (44th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	9	895	8	1,499	2,753	51	2,477	71	4,562	29	27	2,138	1,883
NEW ENGLAND	1	44	1	16	83	3	130	2	188	-	4	24	119
Maine	-	-	-	-	5	-	9	-	41	-	-	-	33
N.H.	-	2	-	3	6	2	17	1	18	-	-	10	51
Vt.	-	-	-	2	3	1	10	-	7	-	-	-	-
Mass.	-	24	1	5	59	-	32	-	86	-	3	8	23
R.I.	-	3	-	-	-	-	16	-	16	-	-	1	-
Conn.	1	15	-	6	10	-	46	1	20	-	1	5	12
MID. ATLANTIC	1	149	2	168	868	8	445	9	302	5	1	103	222
Upstate N.Y.	-	27	1	117	212	3	153	5	80	3	-	49	107
N.Y. City	-	57	-	42	88	2	89	-	47	-	1	35	55
N.J.	-	31	1	5	58	2	89	4	47	1	-	18	47
Pa.	1	34	-	4	510	1	114	-	128	1	-	1	13
E.N. CENTRAL	1	81	-	77	81	8	311	22	2,290	6	1	186	398
Ohio	1	13	-	1	16	4	112	4	1,598	4	-	-	3
Ind.	-	3	-	2	9	1	31	3	40	-	-	29	135
Ill.	-	34	-	24	23	1	77	2	195	1	1	69	103
Mich.	-	28	-	50	30	2	74	8	338	-	-	49	37
Wis.	-	5	-	-	3	-	17	5	119	1	-	39	120
W.N. CENTRAL	2	24	-	49	10	3	119	9	589	9	1	60	79
Minn.	-	2	-	-	3	1	31	4	447	9	1	6	6
Iowa	-	7	-	-	1	-	12	1	35	-	-	-	4
Mo.	2	8	-	2	1	1	30	1	19	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	6	-	1	-	-	1	-
Nebr.	-	3	-	3	4	1	14	1	1	-	-	-	1
Kans.	-	3	-	44	1	-	20	2	86	-	-	15	64
S. ATLANTIC	-	123	-	110	453	15	523	3	280	4	3	88	139
Del.	-	4	-	-	-	-	-	-	12	-	-	1	1
Md.	-	19	-	3	5	2	36	-	30	-	-	34	1
D.C.	-	4	-	1	1	-	4	-	-	-	-	-	-
Va.	-	39	-	14	9	2	63	-	38	1	-	13	6
W. Va.	-	7	-	3	9	-	9	1	97	1	-	2	22
N.C.	-	7	-	1	3	1	101	1	20	1	1	2	5
S.C.	-	4	-	-	2	1	61	-	17	-	-	1	8
Ga.	-	16	-	-	111	3	104	1	20	-	1	16	37
Fla.	-	23	-	88	313	6	145	-	46	1	1	19	59
E.S. CENTRAL	-	9	-	9	5	2	150	2	57	-	-	46	37
Ky.	-	5	-	1	1	-	25	1	19	-	-	28	23
Tenn.	-	-	-	6	2	2	66	-	22	-	-	2	13
Ala.	-	1	-	2	2	-	48	-	9	-	-	-	1
Miss.	-	3	-	-	-	-	11	1	7	-	-	16	-
W.S. CENTRAL	-	61	3	155	868	4	291	2	213	1	2	117	169
Ark.	-	4	-	-	22	-	14	-	7	-	-	1	3
La.	-	5	-	2	4	-	61	-	6	-	-	1	9
Okla.	-	8	-	30	6	1	28	-	-	-	-	3	2
Tex.	-	44	3	123	838	3	188	2	200	1	2	112	155
MOUNTAIN	1	30	-	28	35	3	109	2	102	2	2	80	94
Mont.	-	1	-	-	-	1	6	-	4	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	12
Colo.	-	12	-	7	10	2	46	1	17	2	-	8	30
N. Mex.	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz.	1	8	-	17	5	-	19	1	48	-	2	16	21
Utah	-	4	-	3	-	-	9	-	20	-	-	22	8
Nev.	-	-	-	-	10	-	2	-	7	-	-	12	11
PACIFIC	3	374	2	887	350	5	399	20	541	2	13	1,434	626
Wash.	2	23	-	42	3	-	48	3	71	1	-	38	91
Oreg.	-	14	-	23	5	-	74	-	-	-	-	6	53
Calif.	1	332	2	816	335	5	262	13	440	1	13	1,376	466
Alaska	-	1	-	1	-	-	11	-	10	-	-	5	1
Hawaii	-	4	-	5	7	-	4	4	20	-	-	9	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	-	132	288	-	8	-	78	-	-	11	4
V.I.	-	-	-	-	24	-	-	-	3	-	-	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 6, 1982 and November 7, 1981 (44th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	27,849	26,181	525	21,704	225	4	339	9	947	5,327
NEW ENGLAND	500	500	11	606	8	-	17	1	11	41
Maine	7	5	-	51	-	-	-	-	-	28
N.H.	1	12	-	23	-	-	-	-	1	1
Vt.	4	16	-	13	-	-	2	-	-	2
Mass.	338	322	10	385	6	-	13	1	6	6
R.I.	21	30	1	26	-	-	-	-	2	-
Conn.	129	115	-	108	-	-	2	-	2	6
MID. ATLANTIC	3,760	3,744	65	3,650	7	2	63	1	44	187
Upstate N.Y.	387	361	8	623	7	-	9	1	16	102
N.Y. City	2,225	2,222	39	1,417	-	1	34	-	3	-
N.J.	549	525	5	707	-	1	12	-	13	17
Pa.	599	636	13	903	-	-	8	-	12	68
E.N. CENTRAL	1,555	1,984	106	3,303	1	-	30	-	84	539
Ohio	264	265	10	546	-	-	11	-	76	75
Ind.	174	260	-	397	-	-	2	-	2	70
Ill.	774	1,059	67	1,439	-	-	5	-	6	279
Mich.	257	323	25	742	-	-	9	-	-	6
Wis.	86	77	4	179	1	-	3	-	-	109
W.N. CENTRAL	471	576	12	635	34	-	16	-	33	1,091
Minn.	109	173	-	107	-	-	8	-	-	185
Iowa	29	24	-	66	2	-	1	-	4	352
Mo.	261	328	12	313	22	-	4	-	12	112
N. Dak.	7	9	-	13	-	-	-	-	-	90
S. Dak.	2	2	-	27	1	-	-	-	4	95
Nebr.	14	9	-	26	4	-	2	-	2	116
Kans.	49	31	-	83	5	-	1	-	11	141
S. ATLANTIC	7,674	6,988	124	4,516	12	-	40	2	508	1,040
Del.	20	13	2	42	-	-	-	-	-	2
Md.	416	506	22	523	1	-	9	-	49	53
D.C.	405	565	19	227	-	-	-	-	-	-
Va.	525	600	12	487	4	-	3	1	72	564
W. Va.	26	23	1	133	-	-	4	-	8	39
N.C.	624	556	12	676	-	-	2	-	218	65
S.C.	474	482	8	429	6	-	3	-	105	84
Ga.	1,592	1,714	15	725	-	-	-	-	50	188
Fla.	3,592	2,529	33	1,274	1	-	19	1	6	65
E.S. CENTRAL	1,924	1,706	47	1,984	8	-	19	4	92	591
Ky.	114	91	22	532	-	-	4	-	1	122
Tenn.	540	613	8	640	6	-	3	3	59	329
Ala.	730	511	15	535	-	-	9	-	15	133
Miss.	540	491	2	277	2	-	3	1	17	7
W.S. CENTRAL	7,350	6,303	48	2,615	117	1	35	1	156	1,025
Ark.	180	133	5	308	71	-	5	1	22	141
La.	1,630	1,432	7	391	3	-	3	-	2	31
Okla.	154	150	12	291	33	-	3	-	76	176
Tex.	5,386	4,588	24	1,625	10	1	24	-	56	677
MOUNTAIN	713	647	10	599	30	1	14	-	13	265
Mont.	5	11	1	38	4	-	-	-	4	65
Idaho	25	18	-	28	1	-	-	-	4	10
Wyo.	16	16	-	6	5	-	-	-	1	21
Colo.	187	192	5	77	7	-	3	-	1	48
N. Mex.	168	113	-	101	2	-	-	-	1	23
Ariz.	197	159	3	249	-	1	8	-	-	56
Utah	20	25	-	40	11	-	2	-	-	18
Nev.	95	113	1	60	-	-	1	-	2	4
PACIFIC	3,902	3,733	102	3,798	10	-	105	-	6	548
Wash.	128	162	5	232	1	-	6	-	-	8
Oreg.	93	100	11	165	2	-	4	-	1	3
Calif.	3,572	3,398	85	3,088	6	-	91	-	5	458
Alaska	14	11	-	74	1	-	1	-	-	79
Hawaii	95	62	1	237	-	-	3	-	-	-
Guam	1	-	U	36	-	U	-	U	-	-
P.R.	672	559	1	383	-	-	2	-	-	45
V.I.	22	16	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending November 6, 1982 (44th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	699	473	161	37	16	12	57
Boston, Mass.	194	118	56	9	5	6	25
Bridgeport, Conn.	58	37	14	6	-	1	4
Cambridge, Mass.	26	21	5	-	-	-	3
Fall River, Mass.	29	22	5	2	-	-	-
Hartford, Conn.	47	28	14	2	-	3	1
Lowell, Mass.	21	17	3	1	-	-	2
Lynn, Mass.	12	10	2	-	-	-	2
New Bedford, Mass.	29	19	9	-	1	-	1
New Haven, Conn.	69	46	17	4	1	1	2
Providence, R.I.	62	41	14	4	3	-	7
Somerville, Mass.	12	8	3	1	-	-	1
Springfield, Mass.	46	32	9	3	2	-	5
Waterbury, Conn.	37	29	5	1	2	-	2
Worcester, Mass.	57	45	5	4	2	1	2
MID. ATLANTIC	2,568	1,699	567	169	65	66	112
Albany, N.Y.	62	42	11	1	-	8	-
Allentown, Pa.	25	22	2	1	-	-	-
Buffalo, N.Y.	155	100	37	12	3	3	24
Camden, N.J.	33	29	3	-	1	-	-
Elizabeth, N.J.	30	19	11	-	-	-	-
Erie, Pa.†	39	27	6	1	-	5	2
Jersey City, N.J.	43	28	6	5	-	4	1
N.Y. City, N.Y.	1,369	924	284	96	38	27	43
Newark, N.J.	67	35	20	8	1	2	5
Paterson, N.J.	27	15	7	2	-	3	2
Philadelphia, Pa.†	301	185	76	18	12	10	19
Pittsburgh, Pa.†	75	43	26	6	-	-	3
Reading, Pa.	28	24	3	1	-	-	2
Rochester, N.Y.	112	76	26	7	2	1	7
Schenectady, N.Y.	33	18	10	3	2	-	1
Scranton, Pa.†	25	15	8	-	2	-	-
Syracuse, N.Y.	67	45	13	4	2	3	-
Trenton, N.J.	23	14	7	2	-	-	1
Utica, N.Y.	27	19	6	1	1	-	2
Yonkers, N.Y.	27	19	5	1	1	-	-
E.N. CENTRAL	2,196	1,406	514	119	63	94	87
Akron, Ohio	82	50	21	6	2	3	2
Canton, Ohio	34	31	3	-	-	-	4
Chicago, Ill.	503	311	126	29	15	22	14
Cincinnati, Ohio	142	94	37	5	2	4	18
Cleveland, Ohio	158	98	32	16	2	10	2
Columbus, Ohio	91	64	18	2	3	4	4
Dayton, Ohio	127	68	42	5	5	7	6
Detroit, Mich.	252	159	56	17	7	13	9
Evansville, Ind.	29	23	4	1	1	-	2
Fort Wayne, Ind.	49	38	7	3	-	1	3
Gary, Ind.	18	9	5	3	1	-	-
Grand Rapids, Mich.	50	36	10	1	-	3	3
Indianapolis, Ind.	182	116	42	4	13	7	3
Madison, Wis.	37	18	10	5	1	3	5
Milwaukee, Wis.	132	99	21	5	4	3	4
Peoria, Ill.	52	28	12	6	1	5	4
Rockford, Ill.	33	18	10	3	2	-	1
South Bend, Ind.	31	18	10	1	-	2	-
Toledo, Ohio	105	70	25	4	3	3	2
Youngstown, Ohio	89	58	23	3	1	4	1
W.N. CENTRAL	773	544	161	31	16	21	32
Des Moines, Iowa	57	47	9	-	-	1	-
Duluth, Minn.	34	20	12	1	-	1	3
Kansas City, Kans.	26	16	5	1	3	1	1
Kansas City, Mo.	140	97	33	5	1	4	7
Lincoln, Nebr.	26	17	6	1	-	2	-
Minneapolis, Minn.	94	63	17	6	3	5	5
Omaha, Nebr.	81	58	14	8	1	-	4
St. Louis, Mo.	149	104	34	5	5	1	6
St. Paul, Minn.	72	61	8	-	-	3	-
Wichita, Kans.	94	61	23	4	3	3	7
S. ATLANTIC	1,009	666	213	67	28	33	27
Atlanta, Ga.	132	75	28	18	6	5	2
Baltimore, Md.	101	59	29	8	3	2	1
Charlotte, N.C.	65	37	15	9	2	2	2
Jacksonville, Fla.	93	66	17	4	5	1	-
Miami, Fla.	83	58	20	2	1	2	2
Norfolk, Va.	63	32	23	4	-	4	4
Richmond, Va.	85	44	27	6	2	6	5
Savannah, Ga.	63	40	11	6	5	1	3
St. Petersburg, Fla.	93	77	12	1	2	1	2
Tampa, Fla.	68	44	18	3	-	3	4
Washington, D.C.§	122	108	1	4	2	5	2
Wilmington, Del.	41	26	12	2	-	1	-
E.S. CENTRAL	660	413	168	42	17	20	30
Birmingham, Ala.	104	61	24	8	4	7	3
Chattanooga, Tenn.	44	30	12	1	1	-	3
Knoxville, Tenn.	51	34	8	7	-	2	2
Louisville, Ky.	97	64	25	4	1	3	9
Memphis, Tenn.	169	111	40	12	2	4	6
Mobile, Ala.	38	26	9	1	2	-	1
Montgomery, Ala.	46	27	13	2	2	2	-
Nashville, Tenn.	111	60	37	7	5	2	6
W.S. CENTRAL	1,083	650	259	91	51	32	42
Austin, Tex.	44	23	15	2	3	1	1
Baton Rouge, La.	40	30	7	2	-	2	4
Corpus Christi, Tex.	36	24	9	1	2	-	1
Dallas, Tex.	191	121	44	10	11	5	2
El Paso, Tex.	59	35	17	4	-	3	7
Fort Worth, Tex.	78	51	19	5	1	2	6
Houston, Tex.	171	88	46	20	13	4	3
Little Rock, Ark.	59	31	20	5	-	3	4
New Orleans, La.	116	71	19	11	9	6	1
San Antonio, Tex.	137	92	24	16	4	1	6
Shreveport, La.	76	40	20	10	3	3	4
Tulsa, Okla.	76	44	19	5	5	3	3
MOUNTAIN	606	376	144	45	24	17	26
Albuquerque, N.Mex.	94	56	26	7	1	4	1
Colo. Springs, Colo.	31	19	8	2	2	-	2
Denver, Colo.	113	73	23	7	7	3	6
Las Vegas, Nev.	68	36	17	12	2	1	3
Ogden, Utah	29	21	4	2	-	2	3
Phoenix, Ariz.	138	83	35	11	7	2	-
Pueblo, Colo.	21	14	3	-	2	2	1
Salt Lake City, Utah	37	19	14	3	-	1	1
Tucson, Ariz.	75	55	14	1	3	2	9
PACIFIC	1,756	1,127	378	121	69	59	66
Berkeley, Calif.	18	14	3	1	-	-	-
Fresno, Calif.	76	52	14	3	1	6	2
Glendale, Calif.	30	23	3	3	-	1	2
Honolulu, Hawaii	42	19	14	2	4	3	3
Long Beach, Calif.	87	46	23	6	6	6	1
Los Angeles, Calif.	556	351	124	44	24	11	15
Oakland, Calif.	56	38	12	3	-	3	1
Pasadena, Calif.	21	16	2	3	-	-	2
Portland, Oreg.	123	84	29	5	1	4	3
Sacramento, Calif.	61	43	14	1	2	1	6
San Diego, Calif.	114	72	26	8	3	5	10
San Francisco, Calif.	150	95	31	15	4	5	2
San Jose, Calif.	151	93	30	10	10	8	6
Seattle, Wash.	147	97	24	14	9	3	4
Spokane, Wash.	74	43	22	3	3	3	7
Tacoma, Wash.	50	41	7	-	2	-	2
TOTAL	11,350††	7,354	2,565	722	349	354	479

---

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality June 1982		Estimated number of physician contacts June 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	157,164	826.7	101,397,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	8,251	43.4	5,936,000
Malignant neoplasms (140-208)	1,804,120	35,512	186.8	1,544,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	58,630	308.4	5,909,000
Suicides, homicides (E950-E978)	1,401,880	4,011	21.1	–
Chronic liver disease and cirrhosis (571)	301,070	2,110	11.1	158,000
Cerebrovascular diseases (430-438)	280,430	12,091	63.6	725,000
Pneumonia and influenza[5] (480-487)	124,830	3,555	18.7	716,000
Diabetes mellitus (250)	117,340	2,643	13.9	2,503,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	5,114	26.9	1,014,000
Prenatal care[6]				3,310,000
Infant mortality[6]		3,200	10.6 /1,000 live births	

[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the midpoint of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 7, October 7, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 6, September 9, 1982, p.1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 7, October 7, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, June 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] Data for "infectious diseases and their sequelae" as a cause of death and physician visits comparable to other multiple-code categories (e.g., "malignant neoplasms") are not presently available.

[6] "Prenatal care" (NDTI), and "Infant mortality" (MVSR Vol. 31, No. 6, September 9, 1982, p.1) are included in the table because "Years of potential life lost" does not reflect deaths of children <1 year.

Homicide – Continued

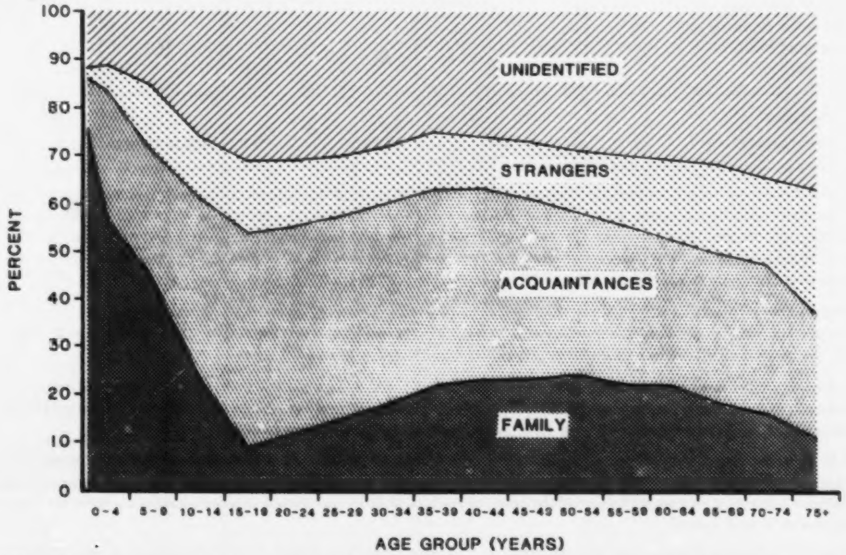
Using homicide statistics for 1978, 1979, and 1980, life expectancy statistics for 1978, and population counts for 1980, the FBI-UCR calculated the probability of homicide victimization (*1*). A U.S. citizen's chance of becoming a homicide victim is 1 out of 153. Males have a 1/100 chance of becoming a victim, while females have a 1/323 chance. White persons have a 1/240 chance compared with a 1/47 chance for persons of other races (*1*).

Of all homicides reported to the FBI-UCR between 1976 and 1979, 19% were committed by members of the victims' families, 39% by acquaintances, and 13% by strangers; offenders were unidentified in 29%. Children less than 10 years old were generally the victims of family members; acquaintances were the most likely offenders of victims 10 to 59 years old; and offenders of victims ≥ 60 were most likely to remain unidentified (Figure 1).

From 1976 to 1979, 47% of all homicides were precipitated by an argument, 1% involved a gang fight, 2% involved sexual assault, and 15% occurred during commission of another crime; miscellaneous non-felony circumstances accounted for 16% of homicides, and the circumstances were undeterminable in 20%. For victims under age 15, miscellaneous non-felony circumstances accounted for the greatest proportion of homicides. For victims 15 to 74 years of age, the precipitating circumstance usually involved an argument. For victims age 75 and older, homicides were most likely to occur during the commission of another crime (Figure 2).

In 1981, 50% of homicides were committed with handguns, 13% with rifles or shotguns, and 19% with cutting or stabbing instruments. The remaining 18% were committed with clubs, poison, hands, fists, feet, or other means (*1*).

FIGURE 1. Proportion of homicides with specified victim-offender relationships, by victim age, — United States, 1976-1979*†



*These data represent the distributions of the relationship between the first specified victim and the first specified offender reported for each homicide incident.

†Based on 69,890 homicides, excluding 1,041 first specified victims of unknown age.

Homicide – Continued

Reported by Office of the Center Director, Center for Health Promotion and Education, CDC.

Editorial Note: Because the majority of homicides in 1981, as in previous years, were committed by relatives or acquaintances of the victims, the report states that "criminal homicide is primarily a societal problem over which law enforcement has little or no control," and suggests that homicides that do not occur during the commission of other crimes defy the traditional prevention and deterrence strategies of law enforcement agencies. This suggests that those acts of violence unrelated to other criminal activity are most immediately in need of public health prevention and intervention strategies (*3*). The foundations for medical and public health involvement in this problem have already been laid through work on family violence (*3-7*). Potential homicide prevention strategies include: a) educational programs focused on conflict and stress management for children and adults, b) promotion of neighborhood ties, c) the design of structurally safe environments, and d) domestic crisis-intervention programs. Additional basic research is needed to more clearly delineate the causes of homicide so that effective preventive strategies can be implemented.

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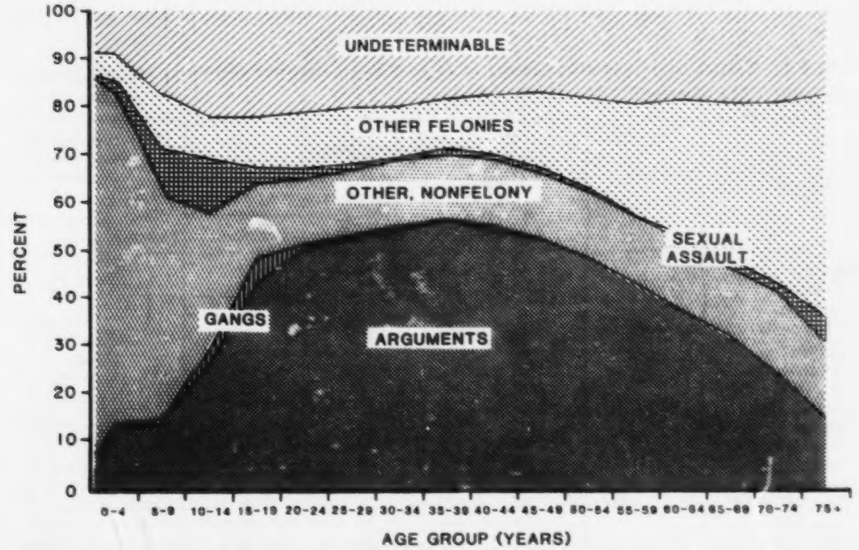
4. Berardo FM. Symposium: Violence and the family. Journal of Marriage and the Family 1971;33:623-731.

FIGURE 2. Proportion of homicides associated with specified circumstances, by victim age — United States, 1976-1979*†



*These data represent the distributions of specified circumstances for only the first specified victim reported for each homicide incident.

†Based on 69,890 homicides, excluding 1,041 first specified victims of unknown age.

Homicide – Continued

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Current Trends

Urban Rat Control — United States, Second Quarter, Fiscal Year 1982

During the second quarter of fiscal year 1982, 44 urban rat control programs identified 825 environmentally improved blocks[*] (EIB) and achieved maintenance status in an additional 706 blocks (Table 5).[†]

Urban rat control programs provide a set of services—resident education, code enforcement, improved municipal services, neighborhood cleanup, and supplemental rat killing—designed to eliminate the environmental conditions that support rat infestations. During the quarter, these services are provided to over 2 million people living in almost 14,000 blocks.

Since 1969, urban rat control programs have served approximately 9.2 million people in over 61,000 blocks. As a result of program efforts, 7.9 million people now live in environmentally improved and rat-free neighborhoods.

Reported by Environment Health Svcs Div, Center for Environmental Health, CDC.

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[*] Blocks that have limited environmental deficiencies and are essentially rat free.

[†] Blocks that have remained in maintenance for at least 1 year and no longer require intensive rat control efforts.

TABLE 5. Status of target-area blocks in Urban Rat Control Programs, second quarter, fiscal year 1982 (January 1-March 31, 1982)

Program community	Target-area blocks				Environmentally improved blocks*	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			< 12 months	≥ 12 months		
REGION I						
Bridgeport	478	240	223	15	59	1,213
Hartford	220	120	85	15	0	0
Previously reporting programs	258	120	138	0	59	372
REGION II						841
Atlantic City	3,395	1,241	993	759	29	5,670
Camden	202	17	78	32	0	0
Jersey City	332	134	60	38	0	119
Newark	183	51	94	38	0	260
New York City	174	16	24	9	27	170
Rochester	1,134	412	292	430	0	1,219
Yonkers	174	76	71	27	0	494
Aguadilla, P.R.	80	60	20	0	0	145
Arecibo, P.R.	199	143	50	6	2	256
Guayama, P.R.	102	36	66	0	0	291
Mayaguez, P.R.	176	121	55	0	0	40
Ponce, P.R.	155	67	72	16	0	239
San Juan, P.R.	226	39	23	62	0	378
Previously reporting programs	258	69	88	101	0	405

Urban Rat Control – Continued

TABLE 5. Status of target-area blocks in Urban Rat Control Programs, second quarter, fiscal year 1982 (January 1-March 31, 1982) *(Continued)*

Program community	Target-area blocks				Environmentally improved blocks[*]	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			< 12 months	≥ 12 months		
REGION III						1,654
"War on Rats"	2,421	1,063	704	358	119	8,272
Chester	852	354	250	67	63	1,385
N.E. Pa. V.C. Assn.[†]	160	57	60	43	0	116
Philadelphia	526	207	84	120	5	1,369
Pittsburgh	883	445	310	128	51	1,697
Previously reporting programs						3,705
REGION IV	3,092	1,471	1,088	533	352	8,729
Tuscaloosa	302	71	209	22	56	147
Miami	1,336	672	574	90	179	1,373
Pensacola	150	87	63	0	33	439
Atlanta, Ga.[§]	491	373	89	29	0	0
Lexington	189	37	6	146	5	128
Louisville	407	190	57	160	72	842
Memphis	217	41	90	86	7	599
Previously reporting programs						5,201
REGION V	1,936	816	853	267	142	5,839
Chicago	476	206	241	29	9	24
Peoria	192	4	63	125	57	132
Akron	138	46	82	10	31	726
Barberton	115	1	102	12	0	182
Cincinnati	83	32	51	0	29	229
Cleveland	285	222	63	0	16	762
Columbus	180	66	63	51	0	385
Toledo	138	36	102	0	0	200
Youngstown	194	93	61	40	0	26
Milwaukee	135	110	25	0	0	0
Previously reporting programs						3,172
REGION VI	845	489	255	101	0	7,039
New Orleans	301	87	136	78	0	3,139
Houston	544	402	119	23	0	2,356
Previously reporting programs						1,544
REGION VII	466	79	328	59	92	4,404
Kansas City, Mo.	100	14	86	0	24	771
St. Louis	244	41	147	56	0	1,168
Omaha	122	24	95	3	68	828
Previously reporting programs						1,637
REGION IX	362	131	211	20	32	1,875
Los Angeles	61	15	32	14	0	504
Oakland	162	62	94	6	17	304
San Francisco	139	54	85	0	15	396
Previously reporting programs						671
Region X						830
Previously reporting programs						830
Total	12,995	5,530	4,655	2,112	825	43,871

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[*] Contiguous blocks where maintenance has been achieved and sustained for a minimum of 12 months. These blocks are no longer part of the approved project target area.

[†] Northeastern Pennsylvania Vector Control Association. Serves Lackawanna and Luzerne counties and the cities of Nanticoke, Wilkes-Barre, and Hazleton.

[§] Target-area blocks are confined to public housing projects.

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CENTERS FOR DISEASE CONTROL

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MMWR

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Epidemiologic Notes and Reports

Staphylococcal Infections among River Guides — Tennessee, South Carolina, and North Carolina

On July 29, 1982, a private physician notified the Tennessee Department of Public Health (TDPH) of six cases of staphylococcal cellulitis among guides employed by a whitewater-rafting company at the Ocoee River in eastern Tennessee. Investigation revealed additional cases among employees at seven rafting operations in Tennessee, North Carolina, and South Carolina.

The first rafting company (Company A) employs approximately 150 persons, including 91 river guides, at sites on the Nantahala, French Broad, Ocoee, and Chattooga rivers. Twenty-three percent of guides are female; most guides are between 18 and 35 years of age. Seventy percent of guides have worked with the company for more than one season. All employees eat and sleep on-site in a communal-like setting, with mess halls, common bathing facilities, and simple wooden bunkhouses at each site, but do not normally share linens, towels, washcloths, clothing, or personal equipment. Employees are assigned randomly to different sites each week.

Twenty-three employees at the Ocoee site were examined. A case was defined as a person who reported lesions compatible with staphylococcal cellulitis, furunculosis, or abscess with onset between April 15 and August 1, 1982. Seven (33%) of 21 guides met this case definition; of these, four had received oral antibiotics, and one had been hospitalized. Employees reported that similar lesions had been common among guides for at least 3 years; many believed that assignment to the Chattooga River site in South Carolina was associated with increased risk of infection. Accordingly, the 20 employees at that site were examined; 12 (71%) of 17 guides met the case definition. At both the Ocoee and Chattooga sites, infections occurred exclusively on the lower extremities, predominantly the anterior lower legs and feet.

A case-control study was conducted of these 38 guides, using uninfected guides as controls. All employees at the Ocoee and Chattooga sites were interviewed, and nasal, palm, and wound cultures were obtained at the Ocoee site. Stepwise logistic regression analysis suggested that a positive culture result and increasing number of weeks worked this season were positively correlated with infection, while experience in prior seasons was protective. Four of six cases from the Ocoee site had had infected roommates, as compared with two of 14 controls.

Work records of these employees were analyzed by the number of weeks worked at each site, and total work weeks at each site were compared for cases and controls. The odds that a given work-week was contributed by a case rather than a control were 2.4 times higher at the Chatooga site than at the Ocoee (odds ratio 2.4, $p < 0.005$). Many employees had not worked at one or more sites; attack rates for those employees with no exposure to certain

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Staphylococcal Infections – Continued

river sites ranged from 50% to 66%, except for those never exposed to the Chattooga, for whom the attack rate was 28%. Based on the number of work weeks at that site, employees categorized as having low, medium, or high exposure to the Chattooga site had attack rates of 26%, 58%, and 67%, respectively ($p < 0.05$). Typically, bunkhouses at the Chattooga site are 100% occupied, as compared with 80% at the Ocoee site, and guides at the Chattooga site spend 15% more time per week on the river. Investigation at the two sites failed to reveal any other differences in personnel, equipment, practices, or the challenges of the rivers likely to explain the differing infection rates.

No deviations from accepted standards of housing, food-handling, or hygiene likely to explain these high attack rates were identified. Accordingly, the investigation was extended to include other rafting companies.

Nine other commercial rafting companies operating on the Chattooga, Ocoee, or Nantahala rivers were identified, and interviews were conducted. Four operations had employees who met the case definition; all four had had employees placed on antibiotics, and two had had employees hospitalized. The five remaining operations reported no infections, antibiotic use, or hospitalization among their employees. Affected and unaffected companies at a given site utilized essentially the same techniques and equipment and rafted the same stretches of river at the same times and days. Seven of 12 operations had on-site, multiple-occupancy sleeping units, as well as other "communal" facilities. All seven "communal" sites and none of five "non-communal" ones reported staphylococcal infections and had had employees on antibiotics ($p = 0.001$); five of seven "communal" and none of five "non-communal" sites had had employees hospitalized for staphylococcal infections ($p = 0.0265$).

One other "communal" and one "non-communal" company operating on the Ocoee were selected for further investigation. Nine of 11 employees at the "communal" company (Company B) and 14 of 15 employees of the "non-communal" company (Company C) were interviewed, examined, and cultured as above. Two of nine employees at Company B were cases, as compared with no cases among 14 employees of Company C.

All culture specimens were routinely processed by TDPH laboratories, and isolates of coagulase-positive *Staphylococcus aureus* were phage-typed by CDC. *S. aureus* carriage rates were 56.5% at Company A, 88.9% at Company B, and 42.9% at Company C. Phage typing revealed several co-dominant phage types at Company A, two dominant phage types at Company B, and no pattern of phage types at Company C.

Employees at both affected and unaffected companies reported frequent skin abrasions caused by jamming their legs under the aft thwarts of the raft for stability. Accordingly, further studies were undertaken at Company A. Five of 27 rafts cultured before a trip were positive for *S. aureus*, as were 12 of 22 rafts cultured after a trip (odds ratio = 4.9, $p < 0.025$). Eighteen rafts were cultured both before and after use. Three were positive for *S. aureus* before a trip, and two of these remained positive after the trip. Of the fifteen rafts negative before a trip, eight were positive after the trip (53% conversion) including three of three at the Chattooga site and five of 12 at the Ocoee site ($p = 0.12$). Two of seven rafts in storage over 72 hours were also positive for *S. aureus*.

Recommended control measures were routine hexachlorophene scrubs for all employees, active surveillance for new cases, prompt medical treatment, isolation of active cases, and improved management of linens and equipment. New cases have not been reported since instituting these measures.

Reported by R Baron, MD, Benton Health Center, Benton, W Schaffner, MD, Vanderbilt University, F Hadley, MD, R Kelley, F Jordan, RH Hutcheson, Jr, MD, State Epidemiologist, Tennessee State Dept of Public Health; JN MacCormack, MD, MP Hines, DVM, State Epidemiologist, North Carolina State Dept of

Staphylococcal Infections – Continued

Human Resources; RL Parker, DVM, State Epidemiologist, South Carolina State Dept of Health and Environmental Control; Field Svcs Div, Epidemiology Program Office, Hospital Infections Program, Center for Infectious Diseases, CDC.

Editorial Note: Epidemic staphylococcal disease is an unusual occupational hazard outside of health care settings. Outbreaks similar to this one are reported to have occurred among members of high school football teams, and to have responded to similar control measures. These reports, however, involved persons with direct, violent, physical contact.

In this report, several epidemiologic features apparently contributed to the spread of disease among the river guides. Whitewater rafting is a seasonal sport; each spring, as the guides arrive, strains of *S. aureus* are undoubtedly introduced into the group by human carriers. The guides' constant exposure to river rafts and the associated trauma to their shins and ankles provide sites for inoculation of the organism and subsequent infection. It is particularly noteworthy that some of the same strains of *S. aureus* infecting the guides were readily recoverable from rafts after several hours of alternate submersion in the river and drying in fresh air and sunlight, even when cultured as long as 72 hours after the raft was last used. *S. aureus* is known to be resistant to drying and to be recoverable from environmental sources, such as dust, for long periods of time; however, such environmental sources of *S. aureus* are not usually believed to be epidemiologically important in transmission of infection and disease, especially in comparison with the potential for transmission from human disseminators (including auto-inoculation).

If persistence of the organism on the rafts and direct inoculation of traumatized skin surfaces by this route were the only mechanism of transmission in this outbreak, differences in the frequency of disease among companies with "communal" and "non-communal" living arrangements or among different river sites would not be expected. Differences do exist for each of these factors, as well as for association of disease among roommates in the "communal" facilities. The "communal" living arrangements apparently altered the epidemiology of the disease, perhaps by facilitating the selection and maintenance of more virulent strains of *S. aureus*, by promoting frequent transmission of staphylococci among roommates, or by providing other means of transmission of the organism to traumatized skin sites, i.e., auto-inoculation. Although factors facilitating such transmission were sought, none was identified. Company A's practice of randomly and frequently rotating the employees may have disseminated the more virulent strains of *S. aureus* to all river sites used by the company.

Hearing Protectors: Field Measurements

In 1977 and 1981, the National Institute for Occupational Safety and Health (NIOSH) conducted field investigations to determine the amount of noise reduction (attenuation) afforded to industrial workers who use earplugs. Tests of 420 workers at 15 industrial plants indicated that 50% of the workers received less than half the potential protection demonstrated in laboratory testing.

Earplug distributors label their products with noise-reduction indexes based on data from standard audiometric laboratory tests. Although earplugs can provide adequate protection from noise hazards, workers generally wear earplugs incorrectly; thus, distributors' estimates may greatly exceed the actual protection of earplugs.

The field investigations included evaluations of five general types of earplug design: twin-flanged (pre-formed in "small" and "regular" sizes); single-flanged (pre-formed in five sizes); acoustic wool (two types made of user-formed cotton-like material, one with a pre-formed

Hearing Protectors – Continued

plastic shroud); custom-molded (two types, one vented with a "noise filter"); and expandable acoustic foam (two types differing only in color).

Twenty-eight workers who used the same type of earplug were randomly selected at each plant. The attenuation provided by the earplug was audiometrically measured for each worker and was then plotted against the tested sound frequency (*1,2*). These results were compared with the results of previous laboratory tests of attenuation at the same frequencies, and, in most cases, revealed substantial differences between the attenuation values recorded in the field and those recorded in the laboratory.

The noise reduction afforded each worker was calculated using the attenuation value at each test frequency and a typical industrial noise spectrum adjusted according to a frequency contour (known as "A-weighting") approximating the human ear response (Table 1). Overall, the median reduction value was 13 decibels (dB) under actual working conditions versus 28 dB estimated from data provided by the distributors.

Reported by Div of Biomedical and Behavioral Science, National Institute for Occupation Safety and Health, CDC.

Editorial Note: There are many reasons for differences between the results of field and laboratory testing. Sizing, fit, and method of insertion are usually less than optimal in pre-formed and user-formed earplugs. Effectiveness of the custom-molded types depends on preparation of the impression materials and fit of the final mold. The expandable foam ear-

(Continued on page 613)

TABLE I. Summary–cases of specified notifiable diseases, United States

Disease	45th Week Ending			Cumulative, First 45 Weeks		
	November 13, 1982	November 14, 1981	Median 1977-1981	November 13, 1982	November 14, 1981	Median 1977-1981
Aseptic meningitis	221	215	176	7,851	8,458	6,756
Brucellosis	2	5	3	142	148	153
Encephalitis: Primary (arthropod-borne & unspec.)	22	32	28	1,228	1,303	1,048
Post-infectious	2	1	2	56	81	190
Gonorrhea: Civilian	15,304	17,153	19,202	825,246	869,298	869,298
Military	554	325	402	22,876	24,114	23,905
Hepatitis: Type A	461	489	573	19,445	21,690	25,203
Type B	412	434	314	18,456	17,698	14,203
Non A, Non B	44	N	N	1,983	N	N
Unspecified	170	218	218	7,648	9,354	8,984
Legionellosis	14	N	N	454	N	N
Leprosy	8	3	1	178	218	150
Malaria	14	11	14	911	1,221	665
Measles (rubeola)	27	50	88	1,525	2,803	13,128
Meningococcal infections: Total	59	68	41	2,544	3,033	2,246
Civilian	59	67	41	2,531	3,021	2,226
Military	-	1	-	13	12	17
Mumps	52	132	144	4,615	3,883	12,161
Pertussis	69	19	30	1,510	1,079	1,486
Rubella (German measles)	11	16	60	2,149	1,899	11,113
Syphilis (Primary & Secondary): Civilian	474	585	540	28,323	26,766	21,596
Military	9	5	5	388	334	272
Tuberculosis	469	467	484	22,173	23,400	23,767
Tularemia	2	2	2	227	238	173
Typhoid fever	7	9	11	347	514	453
Typhus fever, tick-borne (RMSF)	5	6	6	952	1,150	1,085
Rabies, animal	107	92	92	5,436	6,433	4,468

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	5
Botulism (Calif. 4)	75	Paralytic (NYC 1)	5
Cholera	-	Psittacosis (Calif. 1)	104
Congenital rubella syndrome	6	Rabies, human	-
Diphtheria	2	Tetanus (Calif. 1)	69
Leptospirosis	61	Trichinosis	78
Plague	18	Typhus fever, flea-borne (endemic, murine)	38

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 13, 1982 and November 14, 1981 (45th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum 1982	Cum 1982	Cum 1982	Cum 1982	Cum 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	221	142	1,228	56	825,246	869,298	461	412	44	170	14	178
NEW ENGLAND	3	3	50	6	19,938	21,285	18	17	1	12	-	1
Maine	-	-	-	-	1,034	1,149	-	1	-	1	-	-
N.H.	1	-	8	-	656	779	1	-	-	-	-	-
Vt.	-	-	-	-	371	384	7	1	1	-	-	-
Mass.	2	-	20	-	8,963	8,983	3	3	-	11	-	-
R.I.	-	-	-	1	1,327	1,274	4	4	-	-	-	-
Conn.	-	3	22	5	7,587	8,716	3	8	-	-	-	1
MID. ATLANTIC	29	3	123	14	104,846	104,901	61	71	4	11	1	9
Upstate N.Y.	5	3	50	3	17,347	18,085	2	7	-	3	-	1
N.Y. City	14	-	19	-	42,915	42,840	7	24	-	-	-	6
N.J.	7	-	22	-	19,105	20,015	11	18	4	3	1	1
Pa.	3	-	32	11	25,479	23,961	41	22	-	5	-	1
E.N. CENTRAL	30	4	311	11	112,873	128,916	52	61	2	10	10	9
Ohio	11	1	118	4	31,292	40,294	26	17	-	3	8	-
Ind.	U	-	83	3	13,924	10,859	U	U	U	U	U	-
Ill.	2	2	15	2	26,875	37,314	14	8	2	-	-	8
Mich.	17	1	68	-	28,308	28,508	12	36	-	7	2	-
Wis.	-	-	29	2	10,474	11,941	-	-	-	-	-	1
W.N. CENTRAL	23	16	88	5	39,072	42,079	8	12	-	4	-	6
Minn.	-	1	27	1	5,681	6,701	3	1	-	-	-	4
Iowa	11	5	44	1	4,134	4,584	2	1	-	-	-	-
Mo.	7	4	7	1	18,533	19,529	1	9	-	4	-	1
N. Dak.	-	-	-	-	510	522	-	-	-	-	-	-
S. Dak.	1	1	-	1	1,030	1,107	-	1	-	-	-	1
Nebr.	1	2	5	-	2,318	3,112	1	-	-	-	-	-
Kans.	3	3	5	1	6,866	6,524	1	-	-	-	-	-
S. ATLANTIC	52	27	184	8	218,615	214,093	60	91	15	14	2	10
Del.	-	-	-	-	3,603	3,424	-	2	2	1	-	-
Md.	2	-	23	-	27,238	25,301	3	7	-	2	1	3
D.C.	-	-	-	-	13,027	12,059	-	-	-	-	-	-
Va.	22	9	38	1	17,512	19,647	7	20	5	-	1	1
W. Va.	4	-	16	-	2,432	3,225	1	2	1	-	-	-
N.C.	9	-	27	1	34,908	33,137	4	8	-	-	-	-
S.C.	-	2	2	-	20,887	20,920	18	12	1	-	-	-
Ga.	1	3	14	-	43,353	44,416	10	25	-	2	-	1
Fla.	14	13	64	6	55,655	51,964	17	15	6	9	-	5
E.S. CENTRAL	10	12	60	2	71,866	72,800	11	25	2	-	-	-
Ky.	-	-	1	-	9,803	9,065	4	4	-	-	-	-
Tenn.	6	7	27	-	28,334	27,491	2	10	2	-	-	-
Ala.	-	4	16	2	20,840	22,166	-	6	-	-	-	-
Miss.	4	1	16	-	12,889	14,078	5	5	-	-	-	-
W.S. CENTRAL	18	44	192	1	114,582	114,576	91	28	1	60	-	27
Ark.	1	7	19	-	9,345	8,755	1	-	-	1	-	-
La.	2	8	24	-	21,395	19,799	6	3	-	5	-	-
Okla.	7	7	35	-	12,549	12,560	19	6	1	20	-	-
Tex.	8	22	114	1	71,293	73,462	65	19	-	34	-	27
MOUNTAIN	18	3	41	3	28,007	34,293	32	14	5	10	-	2
Mont.	-	2	-	-	1,178	1,255	-	-	1	-	-	-
Idaho	1	1	-	-	1,329	1,516	-	-	-	1	-	1
Wyo.	1	-	-	-	851	908	-	-	-	-	-	-
Colo.	5	-	19	1	7,474	9,194	3	7	-	-	-	-
N. Mex.	2	-	1	-	3,882	3,867	10	1	1	2	-	-
Ariz.	-	-	11	-	7,275	10,116	8	3	3	4	-	-
Utah	9	-	5	2	1,386	1,706	10	3	-	1	-	1
Nev.	-	-	5	-	4,632	5,731	1	-	-	2	-	-
PACIFIC	38	30	179	6	115,447	136,355	128	93	14	49	1	114
Wash.	2	1	12	-	9,969	11,516	9	5	-	4	1	8
Oreg.	3	-	4	-	6,853	8,048	12	15	1	2	-	1
Calif.	29	28	149	6	93,418	110,609	106	68	12	43	-	74
Alaska	2	1	10	-	2,975	3,538	1	4	-	-	-	1
Hawaii	2	-	4	-	2,232	2,644	-	1	1	-	-	30
Guam	U	-	-	1	106	98	U	U	U	U	U	1
P.R.	-	-	1	3	2,336	2,825	8	2	-	3	-	1
V.I.	-	-	-	-	209	211	1	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	338	397	U	U	U	U	U	43

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 13, 1982 and November 14, 1981 (45th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	14	911	27	1,525	2,803	59	2,544	52	4,615	69	11	2,149	1,899
NEW ENGLAND	-	44	-	16	83	4	134	-	188	1	-	24	119
Maine	-	-	-	-	5	-	9	-	41	-	-	-	33
N.H.	-	2	-	3	6	-	17	-	18	-	-	10	51
Vt.	-	-	-	2	3	1	11	-	7	-	-	-	-
Mass.	-	24	-	5	59	2	34	-	86	1	-	8	23
R.I.	-	3	-	-	-	-	16	-	16	-	-	1	-
Conn.	-	15	-	6	10	1	47	-	20	-	-	5	12
MID ATLANTIC	2	151	1	168	909	15	460	6	308	39	-	103	222
Upstate N.Y.	1	28	-	116	214	4	157	2	82	38	-	49	107
N.Y. City	1	58	-	42	90	1	90	-	47	-	-	35	55
N.J.	-	31	1	6	58	4	93	4	51	-	-	18	47
Pa.	-	34	-	4	547	6	120	-	128	1	-	1	13
E.N. CENTRAL	-	83	-	77	84	8	327	18	2,309	19	4	190	406
Ohio	-	13	-	1	16	6	118	6	1,604	1	2	2	3
Ind.	U	3	U	2	9	U	31	U	40	U	U	29	135
Ill.	-	35	-	24	23	1	80	-	196	15	-	69	110
Mich.	-	26	-	50	33	1	75	12	350	3	-	49	37
Wis.	-	6	-	-	3	-	23	-	119	-	2	41	121
W.N. CENTRAL	1	25	-	49	10	6	125	14	603	4	-	60	79
Minn.	-	2	-	-	3	-	31	4	451	-	-	6	8
Iowa	1	8	-	-	1	-	12	10	45	-	-	-	4
Mo.	-	8	-	2	1	4	34	-	19	2	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	7	-	1	1	-	1	-
Nebr.	-	3	-	3	4	-	14	-	1	-	-	-	1
Kans.	-	3	-	44	1	1	21	-	86	1	-	15	64
S. ATLANTIC	2	125	20	130	457	8	531	-	280	2	1	89	139
Del.	-	4	-	-	-	-	-	-	12	-	-	1	1
Md.	1	20	-	3	5	1	37	-	30	-	-	34	1
D.C.	-	4	-	1	1	-	4	-	-	-	-	-	-
Va.	-	39	-	14	9	1	64	-	38	-	-	13	6
W. Va.	-	7	-	3	9	1	10	-	97	-	-	2	22
N.C.	-	7	-	1	3	1	102	-	20	1	-	2	5
S.C.	-	4	-	-	2	3	64	-	17	-	-	1	8
Ga.	-	16	-	-	111	1	105	-	20	-	-	16	37
Fla.	1	24	20	108	317	-	145	-	46	1	1	20	59
E.S. CENTRAL	-	9	-	9	5	3	153	3	60	-	1	47	37
Ky.	-	5	-	1	1	-	25	1	20	-	1	29	23
Tenn.	-	-	-	6	2	1	67	1	23	-	-	2	13
Ala.	-	1	-	2	2	-	48	-	9	-	-	-	1
Miss.	-	3	-	-	-	2	13	1	8	-	-	16	-
W.S. CENTRAL	1	62	-	155	870	7	298	1	214	2	-	117	173
Ark.	-	4	-	-	23	1	15	-	7	-	-	1	6
La.	-	5	-	2	4	1	62	-	6	-	-	1	9
Okla.	-	8	-	30	6	-	28	-	-	1	-	3	2
Tex.	1	45	-	123	837	5	193	1	201	1	-	112	156
MOUNTAIN	-	30	-	28	35	3	112	1	103	1	-	80	95
Mont.	-	1	-	-	-	-	6	-	4	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	1	-	6	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	12
Colo.	-	12	-	7	10	2	48	-	17	-	-	6	30
N. Mex.	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz.	-	8	-	17	5	1	20	1	49	-	-	16	21
Utah	-	4	-	3	-	-	9	-	20	-	-	22	9
Nev.	-	-	-	-	10	-	2	-	7	-	-	12	11
PACIFIC	8	382	6	893	350	5	404	9	550	1	5	1,439	629
Wash.	-	23	-	42	3	-	48	5	76	-	-	38	92
Oreg.	-	14	-	23	5	1	75	-	-	-	-	6	53
Calif.	8	340	6	822	335	4	266	3	443	1	5	1,381	468
Alaska	-	1	-	1	-	-	11	1	11	-	-	5	1
Hawaii	-	4	-	5	7	-	4	-	20	-	-	9	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	-	132	288	-	8	-	78	-	-	11	4
V.I.	-	-	-	-	24	-	-	-	3	-	1	2	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 13, 1982 and November 14, 1981 (45th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	28,323	26,766	469	22,173	227	7	347	5	952	5,438
NEW ENGLAND	508	507	14	618	8	-	17	-	11	41
Maine	7	5	1	53	-	-	-	-	-	26
N.H.	1	12	3	26	-	-	-	-	1	1
Vt.	4	16	-	10	-	-	2	-	-	2
Mass.	345	324	7	392	8	-	13	-	6	6
R.I.	22	32	-	26	-	-	-	-	2	-
Conn.	129	118	3	111	-	-	2	-	2	6
MID. ATLANTIC	3,824	3,815	92	3,742	7	-	63	-	44	189
Upstate N.Y.	387	374	20	643	7	-	9	-	16	103
N.Y. City	2,269	2,261	32	1,449	-	-	34	-	3	-
N.J.	563	536	18	725	-	-	12	-	13	17
Pa.	605	644	22	925	-	-	8	-	12	69
E.N. CENTRAL	1,559	2,022	58	3,359	1	1	32	-	84	547
Ohio	258	268	3	549	-	1	12	-	76	76
Ind.	174	267	U	397	-	U	2	U	2	70
Ill.	774	1,079	34	1,473	-	-	6	-	6	280
Mich.	257	329	12	754	-	-	9	-	-	6
Wis.	86	79	7	186	1	-	3	-	-	115
W.N. CENTRAL	482	587	27	662	35	-	16	-	33	1,102
Minn.	116	175	13	120	-	-	8	-	-	188
Iowa	29	24	1	67	3	-	1	-	4	358
Mo.	264	336	7	320	22	-	4	-	12	113
N. Dak.	7	9	-	13	-	-	-	-	-	91
S. Dak.	2	2	2	29	1	-	-	-	4	95
Nebr.	14	10	-	26	4	-	2	-	2	116
Kans.	50	31	4	87	5	-	1	-	11	141
S. ATLANTIC	7,794	7,148	99	4,611	12	1	41	2	510	1,099
Del.	21	13	-	42	-	-	-	-	-	2
Md.	428	513	11	534	1	-	9	-	49	53
D.C.	413	572	1	228	-	-	-	-	-	-
Va.	544	619	22	509	4	-	3	1	73	612
W. Va.	28	23	4	137	-	-	4	-	8	42
N.C.	632	571	8	684	-	1	3	1	219	65
S.C.	488	491	12	441	6	-	3	-	105	64
Ga.	1,624	1,759	18	743	-	-	-	-	50	195
Fla.	3,616	2,587	23	1,293	1	-	19	-	6	66
E.S. CENTRAL	1,969	1,755	42	2,028	8	1	20	2	94	594
Ky.	119	94	4	536	-	-	4	-	1	123
Tenn.	553	623	23	663	6	1	4	-	59	329
Ala.	742	527	11	548	-	-	9	-	15	135
Miss.	555	511	4	281	2	-	3	2	19	7
W.S. CENTRAL	7,488	6,440	42	2,657	118	2	37	1	157	1,045
Ark.	186	142	2	310	72	2	7	-	22	143
La.	1,634	1,469	21	412	3	-	3	-	2	31
Okla.	161	153	-	291	33	-	3	-	76	181
Tex.	5,507	4,676	19	1,644	10	-	24	1	57	690
MOUNTAIN	716	654	15	614	30	-	14	-	13	264
Mont.	5	11	-	38	4	-	-	-	4	84
Idaho	25	18	-	28	1	-	-	-	4	10
Wyo.	16	16	-	6	5	-	-	-	1	21
Colo.	187	192	2	79	7	-	3	-	1	48
N. Mex.	170	113	-	101	2	-	-	-	1	23
Ariz.	197	163	9	258	-	-	8	-	-	56
Utah	21	26	1	41	11	-	2	-	-	18
Nev.	95	115	3	63	-	-	1	-	2	4
PACIFIC	3,983	3,838	82	3,884	10	2	107	-	6	555
Wash.	128	165	2	234	1	1	7	-	-	8
Oreg.	96	102	6	171	2	-	4	-	1	4
Calif.	3,646	3,498	71	3,159	6	1	92	-	5	464
Alaska	16	11	-	80	1	-	1	-	-	79
Hawaii	97	62	3	240	-	-	3	-	-	-
Guam	1	-	U	38	-	U	-	U	-	-
P.R.	724	564	-	383	-	-	2	-	-	45
V.I.	22	16	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	108	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending November 13, 1982 (45th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	590	379	148	27	15	21	56
Boston, Mass	185	118	42	11	6	8	25
Bridgeport, Conn	43	30	8	4	-	1	4
Cambridge, Mass	23	12	11	-	-	-	4
Fall River, Mass	20	11	6	2	-	1	1
Hartford, Conn	33	15	16	1	-	1	2
Lowell, Mass	27	18	8	1	-	-	2
Lynn, Mass	20	10	8	1	1	-	1
New Bedford, Mass	20	15	4	-	-	1	1
New Haven, Conn	39	27	5	-	3	4	2
Providence, R I	44	23	17	2	-	2	3
Somerville, Mass	4	2	2	-	-	-	-
Springfield, Mass	37	27	6	2	1	1	6
Waterbury, Conn	30	25	2	2	1	-	4
Worcester, Mass	65	46	13	1	3	2	1
MID ATLANTIC	2,354	1,539	547	180	58	47	76
Albany, N Y	40	31	5	2	1	1	-
Allentown, Pa	16	12	4	-	-	-	1
Buffalo, N Y	102	76	19	1	3	3	6
Camden, N J	51	31	15	4	-	1	-
Elizabeth, N J	30	21	4	3	1	1	-
Erie, Pa †	43	20	17	3	2	1	-
Jersey City, N J	48	31	13	1	1	2	-
N Y City, N Y	1,261	821	294	102	28	16	35
Newark, N J	64	23	20	9	4	5	2
Paterson, N J	23	14	5	2	-	2	-
Philadelphia, Pa †	211	129	52	14	11	5	11
Pittsburgh, Pa †	48	26	18	3	-	1	4
Reading, Pa	41	33	6	-	-	2	2
Rochester, N Y	117	79	27	6	3	2	4
Schenectady, N Y	33	28	3	1	-	1	1
Scranton, Pa †	37	27	8	1	1	-	2
Syracuse, N Y	99	70	23	3	-	3	3
Trenton, N J	32	23	5	3	-	1	-
Utica, N Y	23	19	2	2	-	-	2
Yonkers, N Y	35	25	7	-	3	-	3
E N CENTRAL	1,976	1,254	488	114	55	65	51
Akron, Ohio	23	13	7	2	-	1	-
Canton, Ohio	31	22	6	-	1	2	1
Chicago, Ill	474	286	126	31	15	16	10
Cincinnati, Ohio	105	78	21	3	1	2	10
Cleveland, Ohio	141	93	34	3	5	6	4
Columbus, Ohio	141	87	41	3	7	3	1
Dayton, Ohio	103	63	26	6	5	3	-
Detroit, Mich	235	138	53	24	7	13	7
Evansville, Ind	26	20	3	2	-	1	-
Fort Wayne, Ind	40	19	11	6	2	2	-
Gary, Ind	25	15	4	4	1	1	-
Grand Rapids, Mich	40	26	7	2	-	5	-
Indianapolis, Ind	165	103	51	9	1	1	3
Madison, Wis	36	19	12	2	1	2	2
Milwaukee, Wis	118	83	29	4	2	-	3
Peoria, Ill	51	31	11	4	2	3	6
Rockford, Ill	48	34	9	4	1	-	2
South Bend, Ind	40	24	13	1	-	2	-
Toledo, Ohio	74	58	10	3	2	1	1
Youngstown, Ohio	60	42	14	1	2	1	1
W N CENTRAL	601	400	137	24	12	28	26
Des Moines, Iowa	45	28	12	-	1	4	5
Duluth, Minn	14	10	3	1	-	-	-
Kansas City, Kans	24	13	8	2	-	1	-
Kansas City, Mo	94	61	22	5	1	5	4
Lincoln, Nebr	25	18	7	-	-	-	2
Minneapolis, Minn	69	45	13	2	2	7	3
Omaha, Nebr	64	40	19	1	-	4	5
St Louis, Mo	137	100	26	6	2	3	4
St Paul, Minn	66	46	13	4	3	-	1
Wichita, Kans	63	39	14	3	3	4	2

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S ATLANTIC	1,130	697	273	71	34	52	47
Atlanta, Ga	132	64	44	17	4	3	3
Baltimore, Md	302	170	91	14	13	14	3
Charlotte, N C	56	31	15	5	3	1	9
Jacksonville, Fla	110	67	26	9	4	4	4
Miami, Fla	50	26	15	5	1	3	2
Norfolk, Va	48	27	11	3	2	5	3
Richmond, Va	84	52	24	4	1	3	2
Savannah, Ga	47	27	15	4	-	1	7
St Petersburg, Fla	75	65	7	-	1	2	3
Tampa, Fla	45	23	12	2	1	7	2
Washington, D C §	126	112	1	4	2	5	2
Wilmington, Del	55	33	12	4	2	4	7
E S CENTRAL	633	385	148	41	22	37	32
Birmingham, Ala	75	42	20	5	4	4	-
Chattanooga, Tenn	64	42	16	6	-	-	5
Knoxville, Tenn	39	31	4	2	2	-	4
Louisville, Ky	93	59	22	4	2	6	6
Memphis, Tenn	127	68	34	11	5	9	7
Mobile, Ala	91	55	21	6	2	7	4
Montgomery, Ala	37	20	8	1	2	6	2
Nashville, Tenn	107	68	23	6	5	5	4
W S CENTRAL	1,180	691	300	102	47	39	33
Austin, Tex	35	25	6	3	1	-	3
Baton Rouge, La	26	17	6	3	-	-	1
Corpus Christi, Tex	48	32	11	2	-	3	-
Dallas, Tex	166	105	39	11	2	9	1
El Paso, Tex	49	26	16	2	4	1	2
Fort Worth, Tex	78	49	17	8	2	2	3
Houston, Tex	292	145	77	38	19	13	-
Little Rock, Ark	58	35	16	3	1	3	5
New Orleans, La	155	98	35	14	7	1	-
San Antonio, Tex	121	63	40	8	7	3	6
Shreveport, La	70	40	24	2	1	3	4
Tulsa, Okla	82	56	13	8	3	1	8
MOUNTAIN	534	344	120	35	16	18	26
Albuquerque, N Mex	72	39	19	7	3	4	3
Colo Springs, Colo §	32	30	-	-	1	-	5
Denver, Colo	104	65	21	8	2	8	1
Las Vegas, Nev	53	35	11	6	1	-	3
Ogden, Utah	21	15	4	1	-	1	2
Phoenix, Ariz	129	82	31	8	7	1	2
Pueblo, Colo	17	10	6	1	-	-	3
Salt Lake City, Utah	39	20	13	2	-	4	2
Tucson, Ariz	67	48	15	2	2	-	5
PACIFIC	1,629	1,079	346	103	49	52	55
Berkeley, Calif	15	13	1	1	-	-	1
Fresno, Calif	67	43	15	4	2	3	4
Glendale, Calif	17	13	2	1	-	1	-
Honolulu, Hawaii	60	45	10	3	1	1	3
Long Beach, Calif	90	54	31	3	-	2	1
Los Angeles, Calif	489	329	95	39	16	10	6
Oakland, Calif	80	51	19	3	3	4	3
Pasadena, Calif	24	20	2	-	1	1	2
Portland, Oreg	119	79	30	4	4	2	4
Sacramento, Calif	68	43	14	3	3	5	1
San Diego, Calif	98	60	21	8	5	4	9
San Francisco, Calif	128	77	30	13	3	5	4
San Jose, Calif	134	79	34	11	6	4	9
Seattle, Wash	153	104	35	6	1	7	2
Spokane, Wash	49	40	3	2	3	1	4
Tacoma, Wash	38	29	4	2	1	2	2
TOTAL	10,627††	6,768	2,507	677	308	359	402

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages

§ Data not available. Figures are estimates based on average of past 4 weeks

Hearing Protectors – Continued

plugs may not be inserted fully and are often not held in place to prevent slippage as they expand.

Noise-induced hearing loss is one of the most serious and common occupational diseases. More than three million workers wear hearing protectors in industrial environments where adequate engineering controls are unavailable to reduce noise to acceptable limits. The large differences between the laboratory-derived attenuation values provided by distributors and actual attenuation in industrial settings should be considered by employers when choosing earplugs for their employees. Workers can be endangered from excessive noise exposure if employers assume that workers will be protected to the extent indicated by laboratory tests.

References

1. NIOSH. A field investigation of noise reduction afforded by insert-type hearing protectors. (Pub #79-115): National Institute for Occupational Safety and Health, CDC, 1978.
2. NIOSH. A second field investigation of noise reduction afforded by insert-type hearing protectors, final report (#210-81-3001, unpublished). National Institute for Occupational Safety and Health, CDC, 1982.

TABLE 1. Median A-weighted noise reduction

Earplug type	Number of plants	Field tests (dB)*	Laboratory tests† (dB)
Twin-flanged	1	3	30
Single-flanged	3	8	29
Acoustic wool, type A	2	9	22
Acoustic wool, type B	1	11	30
Custom-molded, type A	2	12	20
Custom-molded, type B	2	15	19
Acoustic foam, type A	2	21	36
Acoustic foam, type B	2	17	36

*decibels

†Estimated from data provided by the distributor.

Current Trends

Human *Salmonella* Isolates — United States, 1981

In 1981, 35,625 salmonellae isolations (including *Salmonella typhi*) from humans were reported to CDC. This represents an increase of 18.7% over the 30,004 isolates reported in 1980. The ten most frequently isolated serotypes comprised 68.7% of the total isolates (Table 1). Four of these accounted for 53% of the increase; *S. typhimurium** alone accounted for over 30% (10,443 to 12,176) of the increase; *S. enteritidis* for 11% (1,904 to 2,554); *S. newport* for 8% (1,651 to 2,134); and *S. muenchen* for 4% (374 to 644). Increases were also reported in some of the less frequently isolated serotypes. For example, *S. drypool* increased 476% (17 to 98 isolations) from 1980; *S. chester*, 231% (55 to 182); *S. hadar*, 194% (47 to 138); and *S. seftenberg*, 138% (87 to 207).

The increase in isolates was not confined to one state or region. California, Georgia, Illinois, Louisiana, Massachusetts, Michigan, New York, and Ohio, accounted for 71% of the 18.7% increase. For some serotypes, increases were attributed to outbreaks in one or more states.

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*Includes *S. typhimurium* var. *copenhagen*

Michigan and Ohio accounted for 44.8% of the increase in *S. muenchen*, part of which may be attributed to an outbreak associated with marijuana contaminated with *S. muenchen* (*1*). Seventy-nine percent of the increase in *S. chester* occurred in Massachusetts and Vermont; an outbreak associated with this serotype was traced to roast beef in Vermont (*2*). A 39% increase in *S. newport* occurred in New Jersey, Pennsylvania, and Washington; increases were associated with eating pre-cooked roast beef in New Jersey and Pennsylvania (*3*). An outbreak of *S. newport* was reported in Washington, but no vehicle was identified. Eighty-seven percent of the increase in *S. drypool* occurred in California, Ohio, and Texas; outbreaks were reported in Ohio and Texas (*4*). Illinois, which accounted for 90% of the increase in *S. seftenberg*, reported an outbreak of this serotype in a prison system. Increases in *S. hadar*, *S. typhimurium*, and *S. enteritidis* were not confined to any single state.

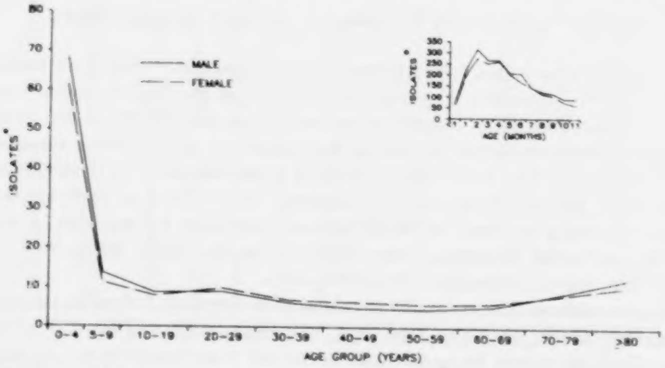
Figure 1 shows the reported age distribution of persons from whom isolates were obtained. The rate was highest for 2- to 4-month old infants, decreased abruptly among age groups of early childhood, and then remained constant through the adult years. The rate of

TABLE 1. The 10 serotypes of *Salmonella* most frequently isolated from humans — United States, 1981.

Serotype	Number of isolates	Percentage of total	Median age of persons from whom isolates were obtained
*S. typhimurium**	12,176	34.2	8.0
S. enteritidis	2,554	7.2	19.0
S. newport	2,134	6.0	15.0
S. heidelberg	2,049	5.8	4.0
S. infantis	1,497	4.2	5.0
S. agona	1,205	3.4	2.0
S. saint-paul	861	2.4	17.5
S. montevideo	739	2.1	18.5
S. muenchen	644	1.8	15.5
S. typhi	604	1.7	26.0
Subtotal	24,463	68.8	
Total	35,625		12.0

*Includes *S. typhimurium* var. copenhagen.

FIGURE 1. *Salmonella* **isolation rates* by age and sex of patient — United States, 1981**



*Per 100,000 population.

Salmonella – Continued

Salmonella isolation was slightly higher among males than among females in the < 20-year age groups; it was slightly higher among females than among males in the 20-69 year age groups. This is consistent with data from previous years. The increase in reported isolates occurred in all age groups; however, the largest increases occurred in the 20-29, 30-39, and 40-49-year age groups. During the past 14 years, the median age of all persons from whom isolates were obtained has continued to increase, from a median of 6 years in 1968 to 12 years in 1981. Table 1 reports the median age of persons from whom isolates were obtained for the 10 serotypes of *Salmonella* most frequently isolated.

In 1981, 38 of 604 reported isolates of *S. typhi* were from carriers, 195 from cases, and the remaining 371, undesignated. The carriers' median age was 61.0, while that of the new cases was 23.0.

Reported by Statistical Svcs Activity, Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: This report is based on the Salmonella Surveillance Activity conducted by the Association of State and Territorial Epidemiologists and by CDC. It is a passive laboratory-based system that receives weekly reports from the 50 states and the District of Columbia and regular summaries from the U.S. Department of Agriculture. The reports do not distinguish between clinical and subclinical infections or between chronic and convalescent carriers. Many selective factors affect whether an infection will be reported. Despite such restrictions, these data provide a basis for comparison with past and future tabulations.

The number of reported *Salmonella* isolations has been steadily increasing since 1977, but the 1981 annual increase of 18.7% is larger than in previous years. Some of this may be artifactual, but increases seen annually are probably not all the result of artifacts. The disproportionately greater increase among young adults in certain states suggests possible recent increases in exposure of this age group to specific contaminated vehicles in certain areas of the country. The gradual increase in the median age of all cases of salmonellosis in the last few years may also indicate a shift in relative rates of exposure of different age groups to contaminated vehicles.

In many outbreaks, the cause was a relatively uncommon serotype, which points to the importance of serotyping *Salmonella*. Recent application of molecular biologic techniques to epidemiologic studies has assisted in providing means of identifying outbreaks caused by common serotypes, and further uses of these techniques are currently being evaluated. In this way, the surveillance data will serve as indicators of the effectiveness of various public health control measures.

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2. CDC. Multiple outbreaks of salmonellosis associated with precooked roast beef—Pennsylvania, New York, Vermont. MMWR 1981;30:569-70.
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4. Riley LW, Cohen ML. Plasmid profiles and *Salmonella* epidemiology. Lancet 1982;1:573. Letter.

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CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Recommendation of the Immunization Practices Advisory Committee (ACIP)

Mumps Vaccine

This revised ACIP recommendation on mumps vaccine represents an updating of the 1980 recommendation. Changes include an expanded statement on allergic reactions. There are no major changes in approach.*

INTRODUCTION

There has been a steady decrease in the incidence rate of reported mumps cases in the United States since the introduction of the live mumps virus vaccine. In 1981, there was a record low of 4,729 cases, which represents a 97% decline from the 185,691 cases reported in 1967, the year of live mumps virus vaccine licensure. Mumps is still primarily a disease of young schoolage children; only about 15% of reported cases occur among adolescents and adults.

Mumps disease is generally self-limited, but it may be moderately debilitating. Benign meningeal signs appear in up to 15% of cases, but permanent sequelae are rare. Nerve deafness is one of the most serious of the rare complications involving the central nervous system (CNS).

Orchitis (usually unilateral) has been reported as a complication in up to 20% of clinical mumps cases in postpubertal males, although sterility is a rare sequela. Symptomatic involvement of other glands and organs has been observed less frequently.

There are limited experimental, clinical, and epidemiologic data that pancreatic damage may result from injury caused by direct viral invasion. However, further research is indicated to determine whether mumps infection contributes to the pathogenesis of diabetes mellitus.

Mumps infection during the first trimester of pregnancy may increase the rate of spontaneous abortion. There is no evidence that mumps during pregnancy causes congenital malformations.

Naturally acquired mumps infection, including the estimated 30% of cases that are subclinical, confers longlasting immunity.

MUMPS VIRUS VACCINE

Live mumps virus vaccine† is prepared in chick-embryo cell culture. From its introduction in December 1967, through 1981, more than 55 million doses have been distributed in the United States. The vaccine produces a subclinical, non-communicable infection with very few side effects. Mumps vaccine is available both in monovalent (mumps only) form and in combinations: mumps-rubella and measles-mumps-rubella (MMR) vaccines. The combined MMR vaccine is the vaccine of choice. In all situations where mumps vaccine is to be used,

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*Replaces previous recommendation on this subject published in *MMWR* 1980;29:87-8, 93-4.

†Official name: Mumps Virus Vaccine, Live.

HE 20.7009:

Mumps Vaccine – Continued

MMR vaccine should be given if recipients are likely to be susceptible to measles and/or rubella as well as to mumps. There is a positive benefit-cost ratio for mumps immunization, that is more marked when mumps vaccine is administered as MMR. All vaccines containing measles antigen should be used at about 15 months of age under routine conditions.

Following vaccination, more than 90% of persons susceptible to mumps develop measurable antibody, which, although of considerably lower titer than that following natural infection, is protective and long-lasting. The duration of vaccine-induced immunity is unknown, but observations over 15 years of live vaccine use indicate both the persistence of antibody and continuing protection against infection. Reported clinical vaccine efficacies have ranged from 75%-90%.

A killed mumps virus vaccine was licensed for use in the United States from 1950 through 1978. This vaccine induced antibody, but the immunity was transient. From 1967, the year of licensure of live mumps vaccine, until 1978, the number of doses of killed mumps vaccine administered is unknown, but appears to have been limited.

Vaccine Shipment and Storage

Failure of protection against mumps may result from the administration of improperly stored vaccine. During storage before reconstitution, mumps vaccine must be kept at 2-8 C (35.6-46.4 F) or colder. It must also be protected from light, which may inactivate the virus. Vaccine must be shipped at 10 C (50 F) or colder and may be shipped on dry ice. After reconstitution, the vaccine should be stored in a dark place at 2-8 C and discarded if not used within 8 hours. Temperature measuring devices should be available at all sites of vaccine storage and monitored daily.

VACCINE USAGE

(See also the current ACIP statement, "General Recommendations on Immunization." *MMWR* 1980;29:76, 81-3)

General Recommendations

Susceptible children, adolescents, and adults should be vaccinated against mumps, unless vaccination is contraindicated. Mumps vaccine can be of particular value for children approaching puberty and for adolescents and adults, especially males, who have not had mumps. Persons who previously received killed mumps vaccine might benefit from revaccination with live mumps vaccine. Persons can be considered susceptible to mumps unless they have documentation of 1) physician-diagnosed mumps or laboratory evidence of immunity, or 2) adequate immunization with live mumps virus vaccine when 12 or more months of age. Most adults are likely to have been infected naturally and generally may be considered immune, even if they did not have clinically recognizable disease.

Because there is no evidence that persons who have previously either received the vaccine or had mumps are at any risk of local or systemic reactions from receiving live mumps vaccine, testing for susceptibility before vaccination is unnecessary. Furthermore, such testing may be unreliable (e.g., mumps skin test and the complement-fixation antibody test). Those tests that have demonstrated reliability (neutralization, ELISA, and radial hemolysis antibody tests) are not readily available.

Dosage: A single dose of vaccine in the volume specified by the manufacturer should be administered subcutaneously.

Age: Live mumps virus vaccine is recommended for all children at any age after 12 months. It should not be administered to younger infants because persisting maternal antibody may interfere with seroconversion. Persons vaccinated before the first birthday might benefit from revaccination after reaching one year of age.

Mumps Vaccine – Continued

Individuals Exposed to Disease

Use of Vaccine: When given after exposure to mumps, live mumps virus vaccine may not provide protection. However, if the exposure did not result in infection, the vaccine should induce protection against subsequent infection.

Use of Immune Globulin (IG): Immune globulin has not been demonstrated to be of established value in postexposure prophylaxis and is not recommended.

Adverse Effects

Parotitis after vaccination has been reported rarely. Allergic reactions including rash, pruritus, and purpura have been associated temporally with mumps vaccination but are uncommon and usually mild and of brief duration. Very rarely, manifestations of CNS involvement, such as febrile seizures, unilateral nerve deafness, and encephalitis within 30 days of mumps vaccination, are reported. No deaths have been reported among patients with such complications, and almost all have recovered completely. It should be emphasized that reports of nervous system illness following mumps vaccination do not necessarily denote an etiologic relationship between the illness and the vaccine. The frequency of reported CNS dysfunction following mumps vaccination is lower than the observed background incidence rate of CNS dysfunction in the normal population.

PRECAUTIONS AND CONTRAINDICATIONS

Pregnancy

Although mumps virus is capable of infecting the placenta and fetus, there is no good evidence that it causes congenital malformations in humans. Mumps vaccine virus also has been shown to infect the placenta, but the virus has not been isolated from the fetal tissues from susceptible women who were vaccinated and underwent elective abortions. However, because of the theoretical risk of fetal damage, it is prudent to avoid giving mumps vaccine to pregnant women.

Allergies

Live mumps vaccine is produced in chick-embryo cell culture. Persons with a history of anaphylactic reactions (hives, swelling of the mouth and throat, difficulty breathing, hypotension, or shock) subsequent to egg ingestion should be vaccinated only with extreme caution. Evidence indicates that persons are not at increased risk if they have egg allergies that are not anaphylactic in nature. Such persons may be vaccinated in the usual manner. There is no evidence to indicate that persons with allergies to chickens or feathers are at increased risk of reaction to the vaccine.

Since mumps vaccine contains trace amounts of neomycin (25 μg), persons who have experienced anaphylactic reactions to topically or systemically administered neomycin should not receive mumps vaccine. Most often, neomycin allergy is manifested as a contact dermatitis which is a delayed-type (cell-mediated) immune response rather than anaphylaxis. In such individuals, the adverse reaction, if any, to 25 μg of neomycin in the vaccine would be an erythematous, pruritic nodule or papule at 48-96 hours. A history of contact dermatitis to neomycin is not a contraindication to receiving mumps vaccine. Live mumps virus vaccine does not contain penicillin.

Recent Administration of Immune Globulin

Passively acquired antibody can interfere with the response to live, attenuated-virus vaccines. Therefore, administration of mumps vaccine should be deferred until approximately 3 months after the administration of immune globulin.

Altered Immunity

Replication of the mumps vaccine virus may be potentiated in patients with immune defi-

Mumps Vaccine – Continued

ciency diseases and by the suppressed immune responses that occur with leukemia, lymphoma, generalized malignancy, or with therapy with corticosteroids, alkylating drugs, antimetabolites, or radiation. Patients with such conditions should not be given live mumps virus vaccine. Since vaccinated persons do not transmit mumps vaccine virus, the risk of mumps exposure for those patients may be reduced by vaccinating their close susceptible contacts.

Other

There is no proven association between mumps vaccination and pancreatic damage or subsequent development of diabetes mellitus.

MUMPS CONTROL

The principal strategy to remove the burden of mumps illness is through achieving and maintaining high immunization levels. Universal immunization as a part of good health care should be routinely carried out in physicians' offices and public health clinics. Programs aimed at vaccinating children with MMR should be established and maintained in all communities. In addition, all other persons thought to be susceptible should be vaccinated unless otherwise contraindicated. Because of limited accessibility to some population subgroups, the Committee recommends taking maximal advantage of clinic visits to vaccinate susceptible persons 15 months of age or older by administering MMR, DTP and OPV simultaneously if all are

(Continued on page 625)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		46th Week Ending			Cumulative, First 46 Weeks		
		November 20, 1982	November 21, 1981	Median 1977-1981	November 20, 1982	November 21, 1981	Median 1977-1981
Aseptic meningitis		269	191	170	8,117	8,649	6,920
Brucellosis		2	8	3	144	156	156
Encephalitis:	Primary (arthropod-borne & unspec.)	36	40	25	1,268	1,343	1,070
	Post-infectious	2	-	4	57	81	194
Gonorrhea:	Civilian	19,591	19,765	19,472	847,524	889,063	889,063
	Military	488	331	388	23,419	24,445	24,107
Hepatitis:	Type A	526	626	603	20,027	22,316	25,806
	Type B	494	465	347	18,945	18,163	14,483
	Non A, Non B	62	N	N	2,047	N	N
	Unspecified	214	234	189	7,799	9,588	9,173
Legionellosis		7	N	N	466	N	N
Leprosy		3	2	2	181	220	155
Malaria		19	24	20	932	1,245	685
Measles (rubeola)		29	26	92	1,554	2,829	13,163
Meningococcal infections:	Total	57	64	48	2,607	3,097	2,294
	Civilian	57	64	48	2,594	3,085	2,274
	Military	-	-	-	13	12	18
Mumps		78	98	242	4,685	3,981	12,424
Pertussis		30	16	29	1,542	1,095	1,515
Rubella (German measles)		16	20	52	2,162	1,919	11,165
Syphilis (Primary & Secondary):	Civilian	704	627	492	29,137	27,393	22,088
	Military	3	4	7	393	338	273
Tuberculosis		522	668	541	22,708	24,068	24,308
Tularemia		3	12	2	230	250	175
Typhoid fever		4	7	7	352	521	468
Typhus fever, tick-borne (RMSF)		5	2	5	957	1,152	1,090
Rabies, animal		95	115	66	5,532	6,548	4,534

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	5
Botulism	75	Paralytic	5
Cholera	-	Psittacosis (Ariz. 1, Wash. 1, Calif. 1)	107
Congenital rubella syndrome	6	Rabies, human	-
Diphtheria	3	Tetanus (Ga. 3, Calif. 1)	73
Leptospirosis (Mo. 2, Ala. 1, Hawaii 2)	66	Trichinosis (N.H. 1, Mo. 1)	80
Plague	18	Typhus fever, flea-borne (endemic, murine) (Hawaii 1)	39

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 20, 1982 and November 21, 1981 (46th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	269	144	1,288	57	847,524	869,063	526	494	62	214	7	181
NEW ENGLAND	7	3	51	6	20,470	21,617	8	29	1	17	2	1
Maine	-	-	-	-	1,050	1,174	1	1	-	-	-	-
N.H.	-	-	8	-	670	803	-	2	-	-	-	-
Vt.	-	-	-	-	384	400	1	1	1	-	-	-
Mass.	4	-	21	-	9,198	9,111	4	10	-	17	-	-
R.I.	1	-	-	1	1,385	1,322	2	2	-	-	-	-
Conn.	2	3	22	5	7,785	8,807	-	13	-	-	2	1
MID. ATLANTIC	36	3	130	14	107,541	106,954	82	81	5	18	1	9
Upstate N.Y.	9	3	52	3	17,727	18,649	12	17	3	6	-	1
N.Y. City	1	-	19	-	44,300	43,478	11	22	-	2	-	6
N.J.	10	-	23	-	19,388	20,313	14	23	2	5	1	1
Pa.	16	-	36	11	26,126	24,514	45	19	-	5	-	1
E.N. CENTRAL	47	4	320	12	118,272	131,980	43	58	3	10	1	10
Ohio	22	1	121	5	32,625	41,513	14	29	1	6	-	-
Ind.	9	-	88	3	14,227	11,113	1	1	-	-	-	-
Ill.	1	2	15	2	31,624	38,005	9	6	2	1	-	8
Mich.	15	1	67	-	29,105	29,162	19	22	-	3	1	-
Wis.	-	-	29	2	10,691	12,167	-	-	-	-	-	2
W.N. CENTRAL	12	17	90	4	39,981	42,813	10	10	6	4	-	6
Minn.	-	1	27	1	5,806	6,739	1	3	2	-	-	4
Iowa	3	5	44	1	4,278	4,754	1	-	1	-	-	-
Mo.	-	4	8	-	18,855	19,840	6	2	1	4	-	1
N. Dak.	1	1	-	-	521	538	-	-	-	-	-	-
S. Dak.	-	1	-	1	1,043	1,138	-	-	-	-	-	1
Nebr.	2	2	6	-	2,374	3,183	1	3	-	-	-	-
Kans.	6	3	5	1	7,104	6,621	1	2	2	-	-	-
S. ATLANTIC	40	27	189	8	223,669	218,720	68	119	8	21	3	10
Del.	-	-	-	-	3,699	3,483	-	1	-	-	-	-
Md.	3	-	24	-	28,052	25,732	3	30	1	1	1	3
D.C.	1	-	-	-	13,551	12,347	-	1	-	-	-	-
Va.	6	9	40	1	17,846	20,135	1	16	1	4	1	1
W. Va.	5	-	16	-	2,484	3,273	2	4	1	-	-	-
N.C.	12	-	28	1	35,426	33,997	2	15	-	5	-	-
S.C.	-	2	2	-	21,623	21,225	17	12	-	1	-	-
Ga.	2	3	14	-	44,264	45,349	7	13	1	2	1	1
Fla.	11	13	65	6	56,724	53,179	36	27	4	8	-	5
E.S. CENTRAL	34	12	61	3	73,259	74,236	17	21	1	-	-	-
Ky.	1	-	1	-	9,961	9,321	9	2	-	-	-	-
Tenn.	2	7	28	-	28,956	28,149	6	10	1	-	-	-
Ala.	28	4	16	3	21,181	22,411	1	4	-	-	-	-
Miss.	3	1	16	-	13,161	14,355	1	5	-	-	-	-
W.S. CENTRAL	29	45	200	1	117,320	118,023	128	37	2	75	-	27
Ark.	-	7	19	-	9,585	8,947	-	1	-	3	-	-
La.	2	8	24	-	21,783	20,558	32	7	1	8	-	-
Okla.	8	8	37	-	12,795	12,869	19	8	1	18	-	-
Tex.	19	22	120	1	73,157	75,649	77	21	-	46	-	27
MOUNTAIN	12	3	43	3	28,707	35,085	42	24	4	24	-	2
Mont.	-	2	-	-	1,196	1,282	-	-	-	-	-	-
Idaho	1	1	-	-	1,341	1,553	1	-	-	1	-	1
Wyo.	-	-	-	-	870	935	2	-	-	2	-	-
Colo.	3	-	19	1	7,661	9,385	2	1	-	3	-	-
N. Mex.	-	-	1	-	3,954	3,978	10	2	-	-	-	-
Ariz.	-	-	11	-	7,512	10,381	17	10	3	14	-	-
Utah	3	-	7	2	1,417	1,738	6	1	-	1	-	1
Nev.	5	-	5	-	4,756	5,833	4	10	1	3	-	-
PACIFIC	52	30	184	6	118,305	139,655	128	115	32	45	-	116
Wash.	6	1	12	-	10,193	11,703	4	3	-	1	-	9
Oreg.	3	-	4	-	6,976	8,331	10	9	1	-	-	1
Calif.	38	29	154	6	95,791	113,311	114	101	31	44	-	74
Alaska	1		10	-	3,037	3,615	-	1	-	-	-	1
Hawaii	4	-	4	-	2,308	2,695	-	1	-	-	-	31
Guam	U	-	-	1	108	104	U	U	U	U	U	1
P.R.	1	-	1	3	2,336	2,871	18	33	-	15	-	1
V.I.	-	-	-	-	214	216	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	388	407	U	U	U	U	U	44

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 20, 1982 and November 21, 1981 (46th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum 1982	1982	Cum 1982	Cum 1981	1982	Cum 1982	1982	Cum 1982	1982	1982	Cum 1982	Cum 1981
UNITED STATES	19	932	28	1,554	2,829	57	2,607	78	4,685	30	16	2,162	1,919
NEW ENGLAND	1	47	-	16	84	4	144	2	183	-	1	21	119
Maine	-	-	-	-	5	-	9	1	42	-	-	-	33
N.H.	-	2	-	3	7	1	18	-	18	-	1	11	51
Vt.	-	-	-	2	3	-	11	-	7	-	-	-	-
Mass.	1	27	-	5	59	-	40	-	79	-	-	4	23
R.I.	-	3	-	-	-	-	16	-	16	-	-	1	-
Conn.	-	15	-	6	10	3	50	1	21	-	-	5	12
MID ATLANTIC	4	155	1	169	928	11	469	5	313	6	-	103	222
Upstate N.Y.	1	29	-	116	217	5	162	3	85	6	-	49	107
N.Y. City	2	60	1	43	101	2	92	-	47	-	-	35	55
N.J.	-	31	-	6	58	1	94	-	51	-	-	18	47
Pa.	1	35	-	4	552	3	121	2	130	-	-	1	13
E.N. CENTRAL	1	84	-	77	86	6	335	43	2,351	9	3	193	410
Ohio	-	13	-	1	16	3	121	28	1,631	2	-	2	3
Ind.	-	3	-	2	9	-	33	2	42	-	-	29	137
Ill.	1	36	-	24	25	1	81	1	197	6	3	72	111
Mich.	-	26	-	50	33	2	77	11	361	-	-	49	37
Wis.	-	6	-	-	3	-	23	1	120	1	-	41	122
W.N. CENTRAL	4	29	-	49	10	4	129	8	611	2	-	60	79
Minn.	1	3	-	-	3	1	32	3	454	-	-	6	8
Iowa	-	8	-	-	1	-	12	-	45	1	-	-	4
Mo.	1	9	-	2	1	1	35	1	20	-	-	38	2
N. Dak.	1	2	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	7	-	1	-	-	1	-
Nebr.	1	4	-	3	4	-	14	-	1	-	-	-	1
Kans.	-	3	-	44	1	2	23	4	90	1	-	15	64
S. ATLANTIC	-	125	20	150	458	17	548	-	280	2	3	93	141
Del.	-	4	-	-	-	-	-	-	12	-	-	1	1
Md.	-	20	1	4	5	2	39	-	30	-	-	34	1
D.C.	-	4	-	1	1	-	4	-	-	-	-	-	-
Va.	-	39	-	14	9	1	65	-	38	-	-	13	6
W. Va.	-	7	-	3	9	-	10	-	97	-	-	3	22
N.C.	-	7	-	1	3	5	107	-	20	-	-	2	5
S.C.	-	4	-	-	2	1	65	-	17	-	-	1	8
Ga.	-	16	-	-	111	2	107	-	20	2	1	17	37
Fla.	-	24	19	127	318	6	151	-	46	-	2	22	61
E.S. CENTRAL	-	9	-	9	5	5	158	2	62	1	-	47	37
Ky.	-	5	-	1	1	-	25	-	20	1	-	29	23
Tenn.	-	-	-	6	2	2	69	1	24	-	-	2	13
Ala.	-	1	-	2	2	3	51	-	9	-	-	-	1
Miss.	-	3	-	-	-	-	13	1	9	-	-	16	-
W.S. CENTRAL	2	64	6	161	871	1	299	3	217	6	2	119	179
Ark.	-	4	-	-	23	-	15	-	7	3	-	1	7
La.	-	5	-	2	4	-	62	-	6	-	-	1	9
Okla.	-	8	-	30	6	-	28	-	-	-	-	3	2
Tex.	2	47	6	129	838	1	194	3	204	3	2	114	161
MOUNTAIN	-	30	-	28	37	2	114	2	105	-	1	81	95
Mont.	-	1	-	-	-	-	6	-	4	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	1	7	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	12
Colo.	-	12	-	7	10	-	48	-	17	-	-	6	30
N. Mex.	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz.	-	8	-	17	7	1	21	1	50	-	-	16	21
Utah	-	4	-	3	-	1	10	-	20	-	-	22	9
Nev.	-	-	-	-	10	-	2	1	8	-	-	12	11
PACIFIC	7	389	2	895	350	7	411	13	563	4	6	1,445	637
Wash.	-	23	-	42	3	1	49	3	79	2	2	40	93
Oreg.	-	14	1	24	5	-	75	-	-	-	-	6	53
Calif.	5	345	1	823	335	6	272	10	453	2	4	1,385	475
Alaska	-	1	-	1	-	-	11	-	11	-	-	5	1
Hawaii	2	6	-	5	7	-	4	-	20	-	-	9	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	1	133	293	-	8	1	81	-	-	12	5
V.I.	-	-	-	-	24	-	-	-	3	-	-	2	1
Pac. Trust Terr.	U	-	U	1	1	U	5	U	6	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 20, 1982 and November 21, 1981 (46th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	29,137	27,393	522	22,708	230	4	352	5	957	5,532
NEW ENGLAND	523	522	20	638	7	-	18	-	11	41
Maine	7	5	-	53	-	-	-	-	-	26
N.H.	5	14	-	26	-	-	-	-	1	1
Vt.	4	17	-	10	-	-	2	-	-	2
Mass.	356	332	12	404	7	-	14	-	6	6
R.I.	22	32	2	28	-	-	-	-	2	-
Conn.	129	122	6	117	-	-	2	-	2	6
MID. ATLANTIC	3,916	3,936	83	3,825	7	-	63	-	44	190
Upstate N.Y.	330	397	17	660	7	-	9	-	16	104
N.Y. City	2,334	2,335	12	1,461	-	-	34	-	3	-
N.J.	572	548	29	754	-	-	12	-	13	17
Pa.	620	656	25	950	-	-	8	-	12	69
E.N. CENTRAL	1,673	2,069	82	3,456	1	-	32	-	84	560
Ohio	292	289	9	558	-	-	12	-	76	78
Ind.	182	271	8	420	-	-	2	-	2	71
Ill.	852	1,097	36	1,509	-	-	6	-	6	287
Mich.	257	332	22	776	-	-	9	-	-	6
Wis.	90	80	7	193	1	-	3	-	-	118
W.N. CENTRAL	497	604	16	678	36	-	16	1	34	1,112
Minn.	124	176	5	125	-	-	8	-	-	189
Iowa	30	24	2	69	3	-	1	-	4	361
Mo.	269	348	-	320	23	-	4	1	13	115
N. Dak.	7	11	2	15	-	-	-	-	-	91
S. Dak.	2	2	1	30	1	-	-	-	4	95
Nebr.	14	10	3	29	4	-	2	-	2	120
Kans.	51	33	3	90	5	-	1	-	11	141
S. ATLANTIC	7,999	7,302	99	4,709	13	2	43	4	514	1,135
Del.	24	13	-	42	-	-	-	-	-	2
Md.	439	527	11	545	1	1	10	-	49	60
D.C.	432	585	7	235	-	-	-	-	-	-
Va.	549	631	24	533	5	1	4	-	73	637
W. Va.	29	24	1	138	-	-	4	-	8	43
N.C.	650	582	7	690	-	-	3	2	221	65
S.C.	501	502	14	455	6	-	3	1	106	64
Ga.	1,665	1,789	7	750	-	-	-	1	51	197
Fla.	3,710	2,649	28	1,321	1	-	19	-	6	67
E.S. CENTRAL	2,029	1,790	35	2,061	8	-	20	-	94	602
Ky.	123	96	8	544	-	-	4	-	1	124
Tenn.	572	637	8	671	6	-	4	-	59	333
Ala.	764	533	12	558	-	-	9	-	15	138
Miss.	570	524	7	288	2	-	3	-	19	7
W.S. CENTRAL	7,662	6,568	84	2,741	117	2	39	-	157	1,066
Ark.	192	148	10	320	72	1	8	-	22	148
La.	1,678	1,469	12	424	3	-	3	-	2	31
Okla.	166	155	4	295	32	-	3	-	76	182
Tex.	5,626	4,796	58	1,702	10	1	25	-	57	705
MOUNTAIN	734	673	24	637	31	-	14	-	13	266
Mont.	5	11	1	39	4	-	-	-	4	85
Idaho	25	18	-	28	1	-	-	-	4	11
Wyo.	16	17	-	6	5	-	-	-	1	21
Colo.	197	204	8	87	7	-	3	-	1	48
N. Mex.	171	118	8	109	3	-	-	-	1	23
Ariz.	204	163	7	264	-	-	8	-	-	56
Utah	21	27	-	41	11	-	2	-	-	18
Nev.	95	115	-	63	-	-	1	-	2	4
PACIFIC	4,104	3,929	79	3,963	10	-	107	-	6	560
Wash.	146	168	6	240	1	-	7	-	-	8
Oreg.	101	105	4	175	2	-	4	-	1	5
Calif.	3,744	3,577	66	3,225	6	-	92	-	5	468
Alaska	15	11	-	80	1	-	1	-	-	79
Hawaii	98	68	3	243	-	-	3	-	-	-
Guam	1	-	U	38	-	U	-	U	-	-
P.R.	724	567	-	391	-	1	3	-	-	48
V.I.	24	16	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	114	-	U	1	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending November 20, 1982 (46th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	716	484	155	37	16	23	56
Boston, Mass	197	125	42	14	8	10	24
Bridgeport, Conn	53	34	13	-	2	4	3
Cambridge, Mass	19	15	2	2	-	-	2
Fall River, Mass	17	15	2	-	-	-	1
Hartford, Conn	62	42	18	-	1	1	3
Lowell, Mass	31	24	5	1	1	-	1
Lynn, Mass	19	11	3	2	2	-	-
New Bedford, Mass	31	26	2	1	-	2	-
New Haven, Conn	61	38	12	7	1	3	3
Providence, R I	62	41	16	1	3	1	6
Somerville, Mass	8	8	-	-	-	-	-
Springfield, Mass	52	35	14	1	-	2	5
Waterbury, Conn	42	29	11	2	-	-	5
Worcester, Mass	62	41	15	6	-	-	4
MID ATLANTIC	2,836	1,927	579	186	63	81	96
Albany, N Y	48	30	8	6	2	2	2
Allentown, Pa	18	16	2	-	-	-	-
Buffalo, N Y	128	75	37	11	1	4	6
Camden, N J	53	43	7	2	-	1	2
Elizabeth, N J	29	27	2	-	-	-	-
Erie, Pa †	37	26	9	1	-	1	1
Jersey City, N J	39	28	5	3	-	3	2
N Y City, N Y	1,591	1,065	317	120	40	49	40
Newark, N J	73	39	19	8	3	4	5
Paterson, N J	21	17	3	-	-	1	3
Philadelphia, Pa †	329	215	81	17	6	10	18
Pittsburgh, Pa †	75	48	17	5	3	2	2
Reading, Pa	34	30	3	-	1	-	2
Rochester, N Y	109	82	18	7	2	-	6
Schenectady, N Y	41	28	12	1	-	-	-
Scranton, Pa †	17	13	4	-	-	-	2
Syracuse, N Y	92	68	16	3	3	2	3
Trenton, N J	42	32	7	2	-	1	-
Utica, N Y	31	24	6	-	-	1	1
Yonkers, N Y	29	21	6	-	2	-	2
E N CENTRAL	2,378	1,542	561	119	69	87	73
Akron, Ohio	94	66	17	6	2	3	-
Canton, Ohio	56	45	10	-	1	-	2
Chicago, Ill	511	286	138	39	14	34	8
Cincinnati, Ohio	159	114	36	5	2	2	14
Cleveland, Ohio	173	111	43	5	5	9	5
Columbus, Ohio	137	88	27	9	9	6	6
Dayton, Ohio	122	75	34	6	2	5	3
Detroit, Mich	289	186	70	17	9	7	3
Evansville, Ind	56	44	9	-	1	2	3
Fort Wayne, Ind	57	37	14	2	4	-	4
Gary, Ind	13	4	4	1	3	1	1
Grand Rapids, Mich	67	50	12	2	1	2	2
Indianapolis, Ind	148	93	37	12	3	3	2
Madison, Wis	35	21	10	3	1	-	5
Milwaukee, Wis	154	113	35	2	2	2	5
Peoria, Ill	59	35	17	4	1	2	4
Rockford, Ill	37	28	7	1	-	1	-
South Bend, Ind	51	34	12	2	1	2	1
Toledo, Ohio	110	82	15	2	6	5	5
Youngstown, Ohio	50	32	14	1	2	1	-
W N CENTRAL	881	587	172	55	23	42	25
Des Moines, Iowa	59	45	7	3	-	4	6
Duluth, Minn	28	20	7	-	-	1	-
Kansas City, Kans	38	19	9	7	2	1	2
Kansas City, Mo	151	104	25	9	3	9	2
Lincoln, Nebr	31	22	7	2	-	-	2
Minneapolis, Minn	107	70	16	8	4	9	3
Omaha, Nebr	86	56	24	3	1	1	2
St Louis, Mo	203	139	37	10	10	7	5
St Paul, Minn	96	65	18	4	2	7	-
Wichita, Kans	82	47	22	9	1	3	3
S ATLANTIC	1,414	854	359	108	40	53	50
Atlanta, Ga	173	107	35	18	4	9	5
Baltimore, Md	262	152	68	26	10	6	5
Charlotte, N C	92	53	22	12	4	1	3
Jacksonville, Fla	128	73	38	7	4	6	1
Miami, Fla	131	88	34	6	1	2	5
Norfolk, Va	48	24	11	2	4	7	3
Richmond, Va	80	49	18	6	3	4	5
Savannah, Ga	61	40	17	2	2	-	3
St Petersburg, Fla	93	79	11	1	1	1	2
Tampa, Fla	90	52	24	5	2	7	9
Washington, D C	181	91	55	22	4	9	5
Wilmington, Del	75	46	26	1	1	1	4
E S CENTRAL	815	485	215	49	32	34	37
Birmingham, Ala	125	74	34	10	2	5	5
Chattanooga, Tenn	54	32	8	8	5	1	1
Knoxville, Tenn	67	43	17	2	4	1	1
Louisville, Ky	151	87	43	8	6	7	9
Memphis, Tenn	197	115	51	12	9	10	7
Mobile, Ala	57	40	12	3	-	2	5
Montgomery, Ala	31	18	5	2	-	6	2
Nashville, Tenn	133	76	45	4	6	2	7
W S CENTRAL	1,350	758	369	105	64	54	46
Austin, Tex	61	36	13	7	5	-	2
Baton Rouge, La	36	22	8	4	-	2	4
Corpus Christi, Tex	28	14	8	2	3	1	-
Dallas, Tex	178	106	39	15	7	11	3
El Paso, Tex	61	30	22	1	2	6	7
Fort Worth, Tex	108	70	23	6	5	4	7
Houston, Tex	369	163	126	40	24	16	8
Little Rock, Ark	83	56	17	5	2	3	5
New Orleans, La	118	70	36	7	2	3	-
San Antonio, Tex	185	106	52	10	10	7	6
Shreveport, La	40	24	11	3	1	1	2
Tulsa, Okla	83	61	14	5	3	-	2
MOUNTAIN	708	480	129	52	22	24	24
Albuquerque, N Mex	75	50	17	6	-	2	3
Colo Springs, Colo	36	25	6	1	1	2	2
Denver, Colo	120	87	19	9	3	2	4
Las Vegas, Nev	82	43	24	10	4	1	2
Ogden, Utah	28	19	2	4	1	2	2
Phoenix, Ariz	191	142	28	11	6	4	5
Pueblo, Colo	26	20	4	2	-	-	2
Salt Lake City, Utah	48	23	12	2	2	9	-
Tucson, Ariz	102	71	17	7	5	2	4
PACIFIC	1,669	1,102	355	104	49	57	92
Berkeley, Calif	21	16	3	2	-	-	1
Fresno, Calif	50	32	8	6	3	1	3
Glendale, Calif	9	9	-	-	-	-	-
Honolulu, Hawaii	73	43	20	5	4	1	6
Long Beach, Calif	73	49	15	5	2	2	5
Los Angeles, Calif	355	227	87	22	11	6	11
Oakland, Calif	65	37	12	7	4	5	4
Pasadena, Calif	33	23	9	-	-	1	3
Portland, Oreg	101	77	15	4	1	4	-
Sacramento, Calif	92	63	21	4	1	3	4
San Diego, Calif	154	97	32	12	7	6	13
San Francisco, Calif	196	121	45	13	5	12	7
San Jose, Calif	184	126	36	7	8	8	13
Seattle, Wash	147	103	30	12	1	1	7
Spokane, Wash	56	41	11	2	-	2	5
Tacoma, Wash	60	39	11	3	2	5	8
TOTAL	12,767††	8,219	2,894	815	378	455	499

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages

Mumps Vaccine – Continued

needed. Health agencies should take necessary steps, including the development and enforcement of school immunization requirements, to assure that all persons in schools at all grade levels and in day-care settings are protected against mumps.

SURVEILLANCE

There is a continuing need to improve the reporting of mumps cases and mumps complications and to document the duration of vaccine effectiveness. Continuous and careful review of adverse reactions is also important. All severe reactions in vaccinated individuals should be evaluated and reported in detail to local or state health officials and to the manufacturer. Even though there are no data to raise concern about a teratogenic effect of mumps vaccine, the Centers for Disease Control would like to collect prospective data on mumps vaccination of women in early pregnancy. Therefore, administration of mumps vaccine to a woman within 3 months of conception should be reported through state health departments to the Immunization Division, Centers for Disease Control, (404/329-3747).

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Epidemiologic Notes and Reports

Update: Deaths among Patients Using Continuous Subcutaneous Insulin Infusion Pumps — United States

Insulin infusion pumps are small, external, battery-powered devices that administer insulin through a subcutaneous catheter. Regular insulin is administered at a slow constant rate, and additional amounts are given before meals. Continuous subcutaneous insulin infusion (CSII) pumps do not have glucose sensors, and patients using them generally monitor their own blood glucose levels. CSII pumps were introduced in the United States in the late 1970's and have been used by increasing numbers of diabetics to improve their glycemic control.

Eleven deaths among patients using these devices were reported in February 1982 (*1*). Since then, 24 additional deaths have been reported to CDC. Deaths were identified by physician reports, a mail survey of diabetologists conducted in April 1982, and a 10-state survey

Subcutaneous Insulin Infusion Pumps – Continued

of physicians conducted in August 1982. Of the 35 deaths reported among pump users in the United States, one occurred in 1980, 20 in 1981, and 14 in 1982. The patients who died ranged in age from 11 to 66 years, and 33 were insulin-dependent (Type I) diabetics. One death has been attributed to device malfunction and one to endocarditis secondary to an abscess at the catheter insertion site. Seven patients were found dead, and three died suddenly. One died with status epilepticus, one drowned, and one died after a fall. Six deaths were related to ketoacidosis and 14 to myocardial infarction, cerebrovascular disease, and renal failure. Two-thirds of those who died had significant autonomic neuropathy, and one-third had advanced renal disease with serum creatinine levels greater than 5.0 mg/dl. The observed number of deaths was not greater than the expected number calculated from the age-specific death rates for Type I diabetics.

On November 9, 1982, a panel of experts* met at CDC to discuss these findings. After a review of the data, it was the panel's consensus that:

1. CSII pump therapy is not associated with excess mortality.
2. Physicians should take great care in selecting patients for intensive glycemic control.

Reported by Technology and Operational Research Br, Div of Diabetes Control, Center for Prevention Svcs, CDC.

Editorial Note: The number of deaths observed among diabetic patients using CSII pumps does not appear to be excessive. Nevertheless, because of the demands that pump therapy places on both the physician and patient and because of the potential problems inherent in the device (i.e., pump slowing, pump runaway, and catheter-induced infection), great care should be used in its application. In selecting patients, physicians should be aware that pump therapy is unlikely to reverse the severe complications of diabetes once they have developed. Patients selected for pump therapy should be willing to monitor their own blood glucose levels regularly and to test their urines for ketones during intercurrent illnesses. In addition, patients should have access to local medical care and should be encouraged to seek assistance in the event of intercurrent illnesses.

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1. CDC. Deaths among patients using continuous subcutaneous insulin infusion pumps—United States. MMWR 1982;31:80-2, 87.

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*M Haffner, MD, Food and Drug Administration; N Berlin, J Field, MD, National Diabetes Advisory Board; E Johnson, PhD, National Institutes of Health; R Guthrie, MD, University of Kansas at Wichita; J Holcombe, MD, University of Oklahoma; R LaPorte, PhD, University of Pittsburgh; R Mecklenburg, MD, Mason Clinic, Seattle; P Raskin, MD, Southwestern Medical Center, Dallas; J Santiago, MD, Washington University, St Louis; and CDC staff.

Current Trends

Measles — United States, First 39 Weeks, 1982

During the first 39 weeks of 1982, 1,284 measles cases were reported in the United States, a record low for the first 9 months of any year and a 51.5% decrease from the 2,646 cases reported during the same period last year. Fewer than 100 cases were reported in each week for the first 39 weeks of 1982, and record low numbers of cases in any 1 week were reported for 34 of those weeks. Fewer than 100 cases of measles per week have now been reported for 68 consecutive weeks.

Measles – Continued

A provisional total of 96 cases of imported measles was reported to CDC during the first 39 weeks of 1982, an average of 2.5 importations per week. Sixteen of these 96 imported cases led to 278 additional cases within the United States. Measles importations and importation-related cases accounted for 29.1% of the total cases reported. Of the 96 measles importations, 60 (62.5%) occurred among U.S. citizens.

Provisional information indicates that, as of week 43, there are only two reported active chains of transmission in the United States.

Reported by the Div of Immunization, Center for Prevention Svcs, CDC

Editorial Note: The measles elimination campaign has made great progress since its inception in 1978. However, the ultimate benefit of the current low incidence in the United States will only be determined by success in maintaining these low incidence levels. To assist in making measles elimination permanent, the Department of Health and Human Services has initiated a national education and promotion campaign on the theme, "Keep Measles A Memory." This phase of the measles elimination program began October 1, with the enlistment and aid of major national medical, educational, and voluntary organizations. These organizations and their local and state chapters and affiliates have worked as a coalition with numerous government agencies to achieve childhood immunization goals, particularly during and since the National Immunization Initiative in 1977-1979. Elimination of vaccine preventable childhood diseases has documented economic benefit whether measured in short- or long-term financial advantages to individuals or to society (*1*).

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The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and distributed by the National Technical Information Service, Springfield, Virginia. The data in this report are provisional, based on weekly telegrams to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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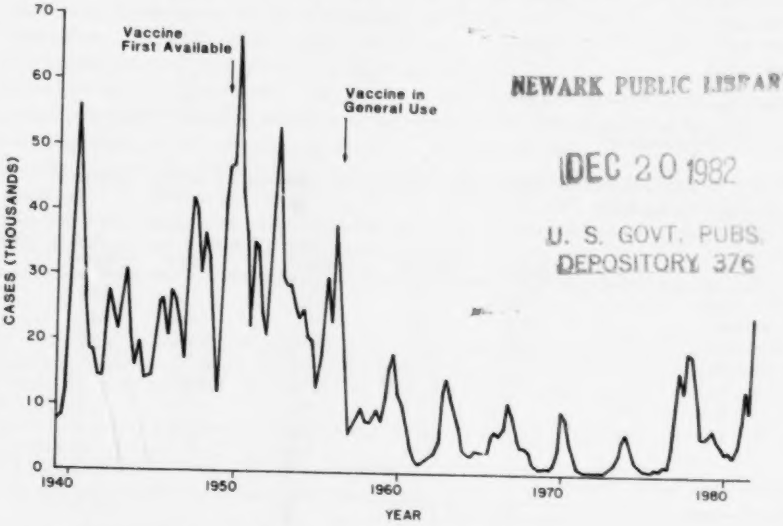
International Notes

Pertussis — England and Wales

Pertussis became a notifiable disease in England and Wales in 1940. From 1957 to 1961, following the widespread use of immunization against pertussis, the annual number of cases reported to the Communicable Diseases Surveillance Center (CDSC) declined by approximately two-thirds (Figure 1). However, outbreaks were reported every 3-4 years up to 1974-1975; these outbreaks were substantially smaller than those occurring before the widespread use of pertussis vaccine. From 1967 to 1974, between 76% and 81% of children had completed immunization for pertussis by their second birthdays. Following public controversy about pertussis vaccine reactions, immunization levels dropped dramatically from 77% in 1974 to 30% in 1978. In 1977, reports of pertussis began to increase, culminating in a large outbreak during 1978-1979, the largest since the 1950s. Following this outbreak, vaccination acceptance rose slightly from 30% in 1978 to approximately 45% in 1981. Beginning in 1981, pertussis again reached epidemic levels, and by 1982, the epidemic had become the largest since 1957. In the first 9 months of 1982, 47,508 cases of pertussis were reported.

FIGURE 1. Pertussis cases reported quarterly — England and Wales, 1940-1982



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Pertussis — Continued

In the third quarter of 1982, reported cases exceeded those in any quarter since the spring of 1957. Over 3,200 cases were reported for the week ending September 10, 1982, alone.

During both the 1977/1979 and the present 1981/1982 outbreaks, reports of *Bordetella pertussis* isolates received by CDSC followed trends similar to case reports.

Age-specific pertussis incidence rates are shown in Table 1. During the 1970-1975 period, the rate was highest for children under 1 year of age. From 1976 to 1981, following the decline in pertussis immunization acceptance, case reports increased for all age groups. The increase for children under 1 year of age was 2.3-fold; it was 4.4-fold for children age 1-4 years. Incidence rates for 5-9 year olds, some of whom would have been vaccinated before the adverse publicity about pertussis vaccine, increased 1.8-fold.

Pertussis deaths and case-fatality ratios (CFR) are shown in Table 2. From 1955 to 1981, the average annual number of deaths during each 6-year period dropped dramatically. Between 1952 and 1975, the average annual CFR during each 6-year period ranged between 0.11 and 0.13. The average CFR for 1976-1981 decreased to 0.04. Approximately 71% of the deaths from 1952 to 1981 occurred among children less than 1 year old. The average annual CFR for this age group during the same 30-year period was 0.71, about 25 times greater than that of all other ages combined.

Reported by Communicable Disease Report, *1982:41, Public Health Laboratory Svc, Communicable Disease Surveillance Center, London, England.*

Editorial Note: During 1977-1979 a major pertussis epidemic with 102,500 reported cases affected all parts of the United Kingdom (*1*). England and Wales are presently experiencing an even larger epidemic, which began in 1981. Common trends in reported pertussis cases and in *B. pertussis* isolates confirm the epidemics. Both epidemics followed periods of low

TABLE 1. Age-specific incidence rates,* pertussis — England and Wales, 1946-1981

	< 1 year	1-4 years	5-9 years	≥ 10 years
1946-1951	1,649	2,498	1,285	11
1952-1957	1,417	1,963	1,101	10
1958-1963	439	521	359	5
1964-1969	253	310	176	3
1970-1975	198	152	92	2
1976-1981	460	662	168	4

*Per 100,000 population

TABLE 2. Age-specific average annual deaths and case-fatality ratios,* pertussis — England and Wales, 1940-1982

	All ages		Age < 1 year		Age ≥ 1 year	
	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio
1940-1945	1,120	1.20	630	†	489	†
1946-1951	639	0.56	411	3.58	228	0.23
1952-1957	138	0.13	94	0.96	44	0.04
1958-1963	29	0.12	21	0.78	8	0.04
1964-1969	23	0.12	19	0.88	4	0.03
1970-1975	12	0.11	10	0.73	1	0.01
1976-1981	7	0.04	5	0.19	2	0.02
Jan-Sept 1982	11	0.02	8	†	3	†

*Per hundred reported cases

†Not available

Pertussis — Continued

vaccine coverage of children. The timing and magnitude of the epidemics, the age group (1-4 years) primarily affected, the fall in levels of vaccine acceptance, and the rise in the number of reported pertussis cases suggest a direct relationship between the decline in vaccination coverage and the occurrence of these epidemics. No other explanations, including socio-economic factors, satisfactorily account for the 1977-1979 epidemic (*2-5*).

Mortality and CFR during the epidemic periods were low. Most deaths and the highest CFR were among patients less than 1 year of age. Reductions in mortality and in CFR are probably associated with improved care of infants rather than a change in the severity of disease.

Pertussis remains a severe disease for a substantial proportion of affected children. During the 1977-1979 epidemic, 4% of patients reported in 21 health areas of England and Wales were hospitalized and 40% of hospitalized patients were less than 6 months of age (*1*). Among those hospitalized, 1% required intensive care; one-third of these had complications. Twelve percent of patients with complications had pneumonia, and 5% had convulsions. Applying these figures to the entire population of England and Wales indicates that, during the epidemic, as many as 5,000 children were admitted to hospitals; 2,000 of these were less than 6 months old; 50 required intensive care; 200 developed pneumonia; and 83 had convulsions induced by the disease. In both Glasgow and Edinburgh, extra wards were opened to accommodate children with pertussis.

During the 1977-1979 epidemic, the efficacy of three doses of pertussis vaccine, given as DTP, in preventing pertussis was evaluated among children under 6 years old in one-fourth of the health areas of England (*2*). Attack rates among DTP recipients and DT recipients were compared. A pertussis vaccine efficacy of greater than 80% was shown for each 1-year-age cohort. When analysis was restricted to bacteriologically confirmed cases, vaccine efficacy was 93%. This study confirmed that the DTP vaccine used in the United Kingdom was highly effective in protecting individuals against pertussis.

The epidemiology of pertussis and the effect, value, and risks of vaccine were reviewed in 1981 by the Joint Committee on Vaccination and Immunization of the Department of Health and Social Security of Great Britain. The Committee concluded that risk from immunization was slight and outweighed by its advantages and that, with due attention to vaccine contraindications, pertussis vaccine should continue to be recommended as part of the basic course of childhood immunization in the United Kingdom (*6*).

This reassurance and the current major epidemic have led to the recent increase in vaccine acceptance in England. However, acceptance levels are still substantially lower than in 1974, and recent increases are not expected to affect this current outbreak.

The recent epidemics in the United Kingdom have demonstrated that a decline in vaccination coverage in a previously highly vaccinated population can result in epidemics of pertussis. The U.S. Public Health Service Immunization Practices Advisory Committee and the American Academy of Pediatrics, after considering the risks and benefits of pertussis vaccination, continue to recommend routine use of DTP vaccine in the United States (*7,8*).

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Pertussis — Continued

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Epidemiologic Notes and Reports

Spectinomycin-Resistant *Neisseria gonorrhoeae* — Worldwide

Until recently, only eight isolates of spectinomycin-resistant *Neisseria gonorrhoeae* had been reported worldwide; four were penicillinase-producing *N. gonorrhoeae* (PPNG), and four were non-PPNG (*1*). During the last 4 months, however, six additional isolates of

(Continued on page 637)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease			47th Week Ending			Cumulative, First 47 Weeks		
			November 27, 1982	November 28, 1981	Median 1977-1981	November 27, 1982	November 28, 1981	Median 1977-1981
Aseptic meningitis			165	157	151	8,286	8,806	7,135
Brucellosis			2	4	4	146	160	160
Encephalitis:	Primary (arthropod-borne & unspec.)		29	33	25	1,308	1,376	1,095
	Post-infectious		-	2	6	56	83	201
Gonorrhea	Civilian		13,634	16,090	16,090	861,158	905,153	905,153
	Military		236	382	382	23,655	24,827	24,490
Hepatitis	Type A		379	469	509	20,435	22,785	26,342
	Type B		461	400	290	19,433	18,563	14,759
	Non A, Non B		59	N	N	2,106	N	N
	Unspecified		157	170	185	7,953	9,758	9,391
Legionellosis			22	N	N	488	N	N
Leprosy			3	2	1	184	222	155
Malaria			10	13	12	942	1,258	697
Measles (rubeola)			28	27	124	1,580	2,856	13,206
Meningococcal infections		Total	51	68	47	2,662	3,165	2,328
		Civilian	51	68	47	2,649	3,153	2,308
		Military	-	-	-	13	12	18
Mumps			58	103	166	4,743	4,084	12,590
Pertussis			10	21	21	1,553	1,116	1,538
Rubella (German measles)			8	18	48	2,170	1,937	11,213
Syphilis (Primary & Secondary)		Civilian	540	604	371	29,678	27,997	22,459
		Military	9	8	9	402	346	284
Tuberculosis			413	500	471	23,123	24,568	24,647
Tularemia			-	1	3	230	251	176
Typhoid fever			12	1	2	365	522	474
Typhus fever, tick-borne (RMSF)			3	3	4	982	1,155	1,104
Rabies, animal			74	74	65	5,607	6,622	4,599

TABLE II. Notifiable diseases of low frequency, United States

	Cum 1982		Cum 1982
Anthrax	-	Poliomyelitis: Total	5
Botulism	75	Paralytic	5
Cholera	-	Psittacosis	107
Congenital rubella syndrome	6	Rabies, human	-
Diphtheria	3	Tetanus (Iowa 1)	74
Leptospirosis (Ala. 1)	67	Trichinosis	80
Plague	18	Typhus fever, flea-borne (endemic, murine)	39

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 27, 1982 and November 28, 1981 (47th week)

Reporting Area	Aseptic Menin-gitis	Brucel-losis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	165	146	1,308	56	861,158	905,153	379	461	59	157	22	184
NEW ENGLAND	6	3	51	6	20,883	22,026	3	16	-	11	2	1
Maine	-	-	-	-	1,078	1,187	-	1	-	-	-	-
N.H.	-	-	8	-	675	818	-	1	-	1	2	-
Vt.	-	-	-	-	387	405	-	1	-	-	-	-
Mass.	6	-	21	-	9,358	9,266	3	5	-	10	-	-
R.I.	-	-	-	1	1,398	1,344	-	1	-	-	-	-
Conn.	-	3	22	5	7,987	9,006	-	7	-	-	-	1
MID. ATLANTIC	17	3	134	14	109,364	108,831	47	92	5	15	2	9
Upstate N.Y.	6	3	55	3	18,258	19,028	8	14	5	3	-	1
N.Y. City	6	-	19	-	44,910	44,378	8	17	-	1	2	6
N.J.	2	-	23	-	19,844	20,532	19	40	-	8	-	1
Pa.	3	-	37	11	26,352	24,893	12	21	-	3	-	1
E.N. CENTRAL	18	4	333	12	120,782	134,577	41	43	6	9	11	10
Ohio	4	1	130	5	32,935	42,470	2	5	-	-	11	-
Ind.	3	-	91	3	15,181	11,232	24	24	1	2	-	-
Ill.	-	2	15	2	32,012	38,878	9	10	5	3	-	8
Mich.	11	1	68	-	29,721	29,655	6	4	-	4	-	-
Wis.	-	-	29	2	10,933	12,342	-	-	-	-	-	2
W.N. CENTRAL	26	17	90	4	40,535	43,570	8	43	2	5	2	7
Minn.	-	1	27	1	5,862	6,911	1	1	-	-	-	4
Iowa	2	5	44	1	4,339	4,834	-	1	-	-	2	-
Mo.	20	4	8	-	19,219	20,174	3	41	2	4	-	1
N. Dak.	-	1	-	-	529	546	-	-	-	-	-	-
S. Dak.	-	1	-	1	1,044	1,163	-	-	-	-	-	1
Nebr.	3	2	6	-	2,392	3,248	1	-	-	1	-	1
Kans.	1	3	5	1	7,150	6,694	3	-	-	-	-	-
S. ATLANTIC	25	28	190	8	227,279	223,069	32	93	7	15	3	11
Del.	-	-	-	-	3,764	3,548	-	-	-	-	-	-
Md.	1	-	24	-	28,611	26,173	3	20	-	2	1	4
D.C.	1	-	-	-	13,769	12,684	-	1	-	-	-	-
Va.	7	10	40	1	18,231	20,474	-	4	3	2	1	1
W. Va.	-	-	16	-	2,530	3,304	1	-	-	-	-	-
N.C.	5	-	28	1	35,884	34,611	3	7	-	2	-	-
S.C.	-	2	2	-	21,915	21,524	10	16	1	1	-	-
Ga.	6	3	14	-	45,175	46,240	8	15	-	1	1	1
Fla.	5	13	66	6	57,400	54,511	7	30	3	7	-	5
E.S. CENTRAL	9	12	63	3	74,535	75,906	9	36	4	1	1	-
Ky.	-	-	1	-	10,073	9,490	-	5	1	-	-	-
Tenn.	6	7	29	-	29,631	28,876	7	24	1	1	-	-
Ala.	3	4	17	3	21,466	22,814	-	7	2	-	1	-
Miss.	-	1	16	-	13,365	14,726	2	-	-	-	-	-
W.S. CENTRAL	15	45	203	1	118,221	119,275	64	33	1	50	-	27
Ark.	-	7	19	-	9,731	9,088	-	3	-	9	-	-
La.	3	8	24	-	22,289	20,645	11	5	-	7	-	-
Okla.	5	8	37	-	13,044	13,173	5	1	1	4	-	-
Tex.	7	22	123	1	73,157	76,369	48	24	-	30	-	27
MOUNTAIN	7	3	55	2	29,175	35,825	46	20	4	26	-	2
Mont.	-	2	-	-	1,225	1,300	1	1	-	-	-	-
Idaho	-	1	-	-	1,388	1,569	-	-	-	-	-	1
Wyo.	-	-	1	-	878	944	-	-	-	-	-	-
Colo.	4	-	19	1	7,796	9,654	3	6	1	1	-	-
N. Mex.	-	-	1	-	3,986	4,021	8	1	-	-	-	-
Ariz.	-	-	11	-	7,606	10,563	22	4	1	21	-	-
Utah	3	-	18	1	1,437	1,780	7	3	1	2	-	1
Nev.	-	-	5	-	4,849	5,994	5	5	1	2	-	-
PACIFIC	42	31	189	6	120,384	142,074	129	85	30	25	1	117
Wash.	2	1	13	-	10,417	11,849	2	7	3	1	1	9
Oreg.	-	-	4	-	7,207	8,399	5	4	3	-	-	1
Calif.	34	29	158	6	97,310	115,382	121	73	24	24	-	75
Alaska	-	1	10	-	3,120	3,703	-	-	-	-	-	1
Hawaii	6	-	4	-	2,330	2,741	1	1	-	-	-	31
Guam	U	-	-	1	106	108	U	U	U	U	U	1
P.R.	-	-	1	3	2,336	2,933	6	5	-	3	-	1
V.I.	U	-	-	-	214	237	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	388	415	U	U	U	U	U	44

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 27, 1982 and November 28, 1981 (47th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	10	942	28	1,580	2,856	51	2,662	58	4,743	10	8	2,170	1,937
NEW ENGLAND	2	49	-	16	84	2	146	5	188	2	-	21	120
Maine	-	-	-	-	5	1	10	1	43	-	-	-	33
N.H.	-	2	-	3	7	-	18	-	18	-	-	11	51
Vt.	-	-	-	2	3	-	11	-	7	-	-	-	-
Mass.	1	28	-	5	59	1	41	2	81	2	-	4	23
R.I.	-	3	-	-	-	-	16	1	17	-	-	1	-
Conn.	1	16	-	6	10	-	50	1	22	-	-	5	13
MID. ATLANTIC	2	157	-	167	937	10	479	4	317	3	1	104	226
Upstate N.Y.	-	29	-	114	218	3	165	3	88	1	1	50	111
N.Y. City	1	61	-	43	102	1	93	-	47	-	-	35	56
N.J.	-	31	-	6	58	3	97	1	52	1	-	18	47
Pa.	1	36	-	4	559	3	124	-	130	1	-	1	13
E.N. CENTRAL	-	84	-	77	90	7	346	21	2,372	1	-	193	411
Ohio	-	13	-	1	20	-	121	6	1,637	1	-	2	3
Ind.	-	3	-	2	9	3	36	1	43	-	-	29	137
Ill.	-	36	-	24	25	3	88	4	201	-	-	72	112
Mich.	-	26	-	50	33	1	78	10	371	-	-	49	37
Wis.	-	6	-	-	3	-	23	-	120	-	-	41	122
W.N. CENTRAL	2	31	-	49	10	7	136	6	617	1	-	60	79
Minn.	1	4	-	-	3	-	32	-	454	-	-	6	8
Iowa	-	8	-	-	1	-	12	6	51	-	-	-	4
Mo.	1	10	-	2	1	5	40	-	20	-	-	38	2
N. Dak.	-	2	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	8	-	1	-	-	1	-
Nebr.	-	4	-	3	4	-	14	-	1	-	-	-	1
Kans.	-	3	-	44	1	1	24	-	90	1	-	15	64
S. ATLANTIC	2	127	18	168	471	8	556	4	284	-	-	93	141
Del.	-	4	-	-	-	1	1	-	12	-	-	1	1
Md.	-	20	-	4	5	1	40	-	30	-	-	34	1
D.C.	-	4	-	1	1	-	4	-	-	-	-	-	-
Va.	-	39	-	14	9	2	67	1	39	-	-	13	6
W. Va.	-	7	-	3	9	-	10	1	98	-	-	3	22
N.C.	1	8	-	1	3	1	108	-	20	-	-	2	5
S.C.	-	4	-	-	2	1	66	-	17	-	-	1	8
Ga.	-	16	-	-	111	2	109	2	22	-	-	17	37
Fla.	1	25	18	145	331	-	151	-	46	-	-	22	61
E.S. CENTRAL	-	9	-	9	5	2	160	1	63	-	-	47	38
Ky.	-	5	-	1	1	-	25	-	20	-	-	29	24
Tenn.	-	-	-	6	2	1	70	1	25	-	-	2	13
Ala.	-	1	-	2	2	1	52	-	9	-	-	-	1
Miss.	-	3	-	-	-	-	13	-	9	-	-	16	-
W.S. CENTRAL	-	64	9	170	871	9	308	10	227	-	1	120	180
Ark.	-	4	-	-	23	-	15	-	7	-	-	1	7
La.	-	5	9	11	4	1	63	-	6	-	-	1	9
Okla.	-	8	-	30	6	2	30	-	-	-	-	3	2
Tex.	-	47	-	129	838	6	200	10	214	-	1	115	162
MOUNTAIN	-	30	-	28	37	2	116	3	108	-	1	82	96
Mont.	-	1	-	-	-	1	7	1	5	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	7	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	12
Colo.	-	12	-	7	10	-	48	1	18	-	-	6	30
N. Mex.	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz.	-	8	-	17	7	-	21	1	51	-	-	16	22
Utah	-	4	-	3	-	1	11	-	20	-	1	23	9
Nev.	-	-	-	-	10	-	2	-	8	-	-	12	11
PACIFIC	2	391	1	896	351	4	415	4	567	3	5	1,450	646
Wash.	1	24	-	42	3	-	49	-	79	2	-	40	93
Oreg.	-	14	-	24	5	-	75	-	-	-	-	6	53
Calif.	-	345	1	824	336	4	276	4	457	1	5	1,390	484
Alaska	-	1	-	1	-	-	11	-	11	-	-	5	1
Hawaii	1	7	-	5	7	-	4	-	20	-	-	9	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	1	134	297	-	8	-	81	-	-	12	5
V.I.	U	-	U	-	24	U	-	U	3	U	U	2	1
Pac. Trust Terr.	U	-	U	1	1	U	5	U	6	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 27, 1982 and November 28, 1981 (47th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	29,678	27,997	413	23,123	230	12	365	3	962	5,607
NEW ENGLAND	540	528	15	653	7	-	18	-	11	42
Maine	7	5	-	53	-	-	-	-	-	26
N.H.	5	14	-	26	-	-	-	-	1	1
Vt.	4	17	-	10	-	-	2	-	-	2
Mass.	367	338	8	412	7	-	14	-	6	7
R.I.	22	32	-	28	-	-	-	-	2	-
Conn.	135	122	7	124	-	-	2	-	2	6
MID. ATLANTIC	3,984	4,025	98	3,923	7	1	64	1	45	193
Upstate N.Y.	395	406	9	669	7	-	9	-	16	107
N.Y. City	2,384	2,381	47	1,508	-	1	35	-	3	-
N.J.	582	570	11	765	-	-	12	1	14	17
Pa.	623	668	31	981	-	-	8	-	12	69
E.N. CENTRAL	1,709	2,125	55	3,511	1	1	34	-	84	564
Ohio	292	289	8	566	-	-	12	-	76	79
Ind.	190	274	5	425	-	-	2	-	2	71
Ill.	880	1,145	24	1,533	-	-	7	-	6	289
Mich.	257	333	16	792	-	1	10	-	-	6
Wis.	90	84	2	195	1	-	3	-	-	119
W.N. CENTRAL	500	614	7	691	36	-	16	-	34	1,119
Minn.	124	178	1	126	-	-	8	-	-	189
Iowa	31	24	-	69	3	-	1	-	4	365
Mo.	271	356	6	332	23	-	4	-	13	117
N. Dak.	7	11	-	15	-	-	-	-	-	91
S. Dak.	2	2	-	30	1	-	-	-	4	95
Nebr.	14	10	-	29	4	-	2	-	2	120
Kans.	51	33	-	90	5	-	1	-	11	142
S. ATLANTIC	8,141	7,469	78	4,783	13	2	45	1	515	1,153
Del.	24	13	1	42	-	-	-	-	-	2
Md.	446	535	6	551	1	-	10	-	49	60
D.C.	439	599	-	235	-	-	-	-	-	-
Va.	563	648	-	533	5	-	4	-	73	651
W. Va.	30	25	2	140	-	-	4	-	8	45
N.C.	667	594	20	707	-	-	3	1	222	65
S.C.	514	511	11	466	6	-	3	-	106	65
Ga.	1,690	1,811	23	773	-	-	-	-	51	198
Fla.	3,768	2,723	15	1,336	1	2	21	-	6	67
E.S. CENTRAL	2,067	1,829	42	2,103	8	-	20	1	96	610
Ky.	126	98	6	550	-	-	4	-	1	124
Tenn.	582	647	17	688	6	-	4	-	59	339
Ala.	773	543	16	574	-	-	9	1	17	140
Miss.	586	541	3	291	2	-	3	-	19	7
W.S. CENTRAL	7,850	6,731	43	2,784	117	-	39	-	157	1,094
Ark.	204	148	7	327	72	-	8	-	22	150
La.	1,714	1,534	10	434	3	-	3	-	2	31
Okla.	167	159	7	302	32	-	3	-	75	185
Tex.	5,765	4,890	19	1,721	10	-	25	-	57	728
MOUNTAIN	751	694	12	649	31	-	14	-	14	267
Mont.	5	11	1	40	4	-	-	-	5	85
Idaho	25	18	-	28	1	-	-	-	4	11
Wyo.	16	17	-	6	5	-	-	-	1	21
Colo.	204	204	3	90	7	-	3	-	1	48
N. Mex.	181	125	-	109	3	-	-	-	1	23
Ariz.	204	170	8	272	-	-	8	-	-	57
Utah	21	27	-	41	11	-	2	-	-	18
Nev.	95	122	-	63	-	-	1	-	2	4
PACIFIC	4,156	3,992	63	4,026	10	8	115	-	6	565
Wash.	146	176	9	249	1	-	7	-	-	8
Oreg.	104	110	2	177	2	-	4	-	1	5
Calif.	3,791	3,625	51	3,276	6	8	100	-	5	473
Alaska	15	12	-	80	1	-	1	-	-	79
Hawaii	100	69	1	244	-	-	3	-	-	-
Guam	1	-	U	38	-	U	-	U	-	-
P.R.	724	574	-	419	-	-	3	-	-	48
V.I.	24	16	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	114	-	U	1	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending November 27, 1982 (47th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	612	407	148	24	12	20	55
Boston, Mass	187	109	56	9	5	8	21
Bridgeport, Conn	49	36	7	3	-	3	4
Cambridge, Mass	24	14	7	2	-	1	4
Fall River, Mass	29	23	5	1	-	-	-
Hartford, Conn	48	34	9	3	1	1	1
Lowell, Mass	18	12	3	1	2	-	-
Lynn, Mass	17	13	3	-	1	-	-
New Bedford, Mass	14	12	2	-	-	-	-
New Haven, Conn	35	17	14	2	-	2	1
Providence, R I	45	32	9	1	1	2	8
Somerville, Mass	10	7	3	-	-	-	-
Springfield, Mass	45	29	9	2	1	3	4
Waterbury, Conn	34	26	7	-	1	-	6
Worcester, Mass	57	43	14	-	-	-	6
MID ATLANTIC	2,238	1,483	483	154	56	60	74
Albany, N Y	40	32	1	5	1	1	2
Allentown, Pa	19	15	4	-	-	-	-
Buffalo, N Y	114	71	31	5	4	3	6
Camden, N J	31	19	6	2	3	1	2
Elizabeth, N J	23	14	7	1	1	-	1
Erie, Pa †	37	26	6	2	-	3	1
Jersey City, N J	59	31	13	6	7	2	3
N Y City, N Y	1,229	814	268	98	30	19	29
Newark, N J	40	20	16	2	-	2	2
Paterson, N J	31	22	6	3	-	-	2
Philadelphia, Pa †	196	112	45	15	5	19	15
Pittsburgh, Pa †	52	29	15	4	3	1	1
Reading, Pa	20	15	3	1	-	1	3
Rochester, N Y	103	81	14	6	-	2	2
Schenectady, N Y	46	37	6	2	-	1	2
Scranton, Pa †	21	15	6	-	-	-	-
Syracuse, N Y	86	63	17	2	1	3	1
Trenton, N J	28	21	5	-	1	1	2
Utica, N Y	20	16	4	-	-	-	-
Yonkers, N Y	41	30	10	-	-	1	-
E N CENTRAL	1,850	1,163	416	122	66	82	52
Akron, Ohio	33	18	11	2	-	2	-
Canton, Ohio	31	22	8	1	-	-	3
Chicago, Ill	460	272	110	35	19	24	15
Cincinnati, Ohio	96	61	20	6	8	1	7
Cleveland, Ohio	156	90	39	16	3	8	-
Columbus, Ohio	177	94	56	12	6	9	5
Dayton, Ohio	62	44	11	-	4	3	2
Detroit, Mich	214	127	53	22	5	7	3
Evansville, Ind	32	22	5	1	2	2	-
Fort Wayne, Ind	43	26	8	4	4	1	4
Gary, Ind	15	10	4	1	-	-	-
Grand Rapids, Mich	33	23	7	-	-	3	1
Indianapolis, Ind	147	85	41	11	5	5	1
Madison, Wis	24	15	2	2	2	3	1
Milwaukee, Wis	77	62	9	2	-	4	2
Peoria, Ill	30	18	6	1	1	4	2
Rockford, Ill	35	23	6	2	2	2	2
South Bend, Ind	28	20	6	-	2	-	1
Toledo, Ohio §	106	97	1	2	2	3	2
Youngstown, Ohio	51	34	13	2	1	1	1
W N CENTRAL	601	388	124	36	17	36	28
Des Moines, Iowa	44	29	13	-	-	2	4
Duluth, Minn	29	21	4	-	1	3	-
Kansas City, Kans	41	23	9	4	3	2	2
Kansas City, Mo	104	72	21	2	1	8	6
Lincoln, Nebr	32	20	6	2	2	2	1
Minneapolis, Minn	62	43	7	6	2	4	3
Omaha, Nebr	89	43	18	7	-	3	6
St Louis, Mo	115	69	27	10	2	7	3
St Paul, Minn	56	39	10	2	-	5	1
Wichita, Kans	49	29	11	3	6	-	2
S ATLANTIC	1,037	591	277	87	46	30	26
Atlanta, Ga	111	60	36	12	3	-	-
Baltimore, Md	135	71	38	21	3	2	2
Charlotte, N C	59	39	10	4	3	3	2
Jacksonville, Fla	67	35	15	4	6	2	-
Miami, Fla	140	80	42	7	4	7	3
Norfolk, Va	42	29	7	1	3	1	5
Richmond, Va	66	34	19	4	3	6	4
Savannah, Ga	40	16	18	5	1	-	2
St Petersburg, Fla	64	53	7	-	4	-	1
Tampa, Fla	51	31	11	5	3	1	2
Washington, D C	201	112	54	18	10	7	4
Wilmington, Del	61	31	20	6	3	1	1
E S CENTRAL	545	339	111	40	18	37	28
Birmingham, Ala	70	46	11	4	6	3	6
Chattanooga, Tenn	48	35	9	3	1	-	3
Knoxville, Tenn	52	34	7	5	1	5	1
Louisville, Ky	65	46	14	3	-	2	2
Memphis, Tenn	146	72	35	13	7	19	5
Mobile, Ala	74	50	15	6	1	2	4
Montgomery, Ala	27	19	5	1	-	2	2
Nashville, Tenn	63	37	15	5	2	4	5
W S CENTRAL	771	454	187	64	34	32	25
Austin, Tex	17	10	5	1	-	1	-
Baton Rouge, La	60	41	11	7	-	1	6
Corpus Christi, Tex	63	39	10	6	5	3	1
Dallas, Tex	146	80	44	10	8	4	1
El Paso, Tex	46	20	14	2	2	8	4
Fort Worth, Tex	58	41	12	1	-	4	2
Houston, Tex	67	34	19	6	5	3	2
Little Rock, Ark	35	13	15	4	2	1	2
New Orleans, La	88	51	18	11	4	4	-
San Antonio, Tex	104	68	26	5	3	2	4
Shreveport, La	23	19	2	1	-	1	-
Tulsa, Okla	64	38	11	10	5	-	3
MOUNTAIN	510	305	127	49	15	14	31
Albuquerque, N Mex	49	27	14	7	1	-	2
Colo Springs, Colo	34	19	9	2	2	2	5
Denver, Colo	97	62	22	7	3	3	5
Las Vegas, Nev	68	36	17	12	2	1	3
Ogden, Utah	10	-	9	1	-	-	2
Phoenix, Ariz	108	70	25	10	2	1	3
Pueblo, Colo	22	15	4	1	2	-	4
Salt Lake City, Utah	54	34	7	5	2	6	2
Tucson, Ariz	68	42	20	4	1	1	5
PACIFIC	1,637	1,096	348	112	33	43	76
Berkeley, Calif	29	21	7	1	-	-	2
Fresno, Calif	57	38	10	4	5	2	4
Glendale, Calif	25	19	6	-	-	-	2
Honolulu, Hawaii	26	15	6	1	3	1	3
Long Beach, Calif	95	64	20	9	2	-	4
Los Angeles, Calif	561	361	127	55	3	13	16
Oakland, Calif	49	31	13	2	1	1	1
Pasadena, Calif	16	10	4	-	1	1	-
Portland, Oreg	161	109	32	11	5	3	12
Sacramento, Calif	56	40	14	1	-	1	3
San Diego, Calif	54	40	11	2	-	1	2
San Francisco, Calif	126	85	29	5	2	5	2
San Jose, Calif	152	102	29	8	7	6	9
Seattle, Wash	129	88	26	10	3	2	5
Spokane, Wash	49	29	14	1	-	5	6
Tacoma, Wash §	52	46	-	2	1	2	5
TOTAL	9,799††	6,226	2,221	688	297	354	395

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

spectinomycin-resistant gonococci have been identified and reported. Available details on these cases highlight the potential magnitude of the problem.

Non-PPNG case: A 21-year-old U.S. airman stationed at Osan Air Force Base, Republic of Korea, was seen at the Osan hospital clinic July 20, 1982, with a 3-day history of purulent urethral discharge that began 3 days after sexual exposure to a prostitute. A Gram stain was consistent with gonorrhea, and he was treated with spectinomycin 2 g intramuscularly (IM). Cultures of the discharge grew beta-lactamase-negative *N. gonorrhoeae* susceptible to penicillin and spectinomycin.

On July 27, the patient returned for a scheduled test of cure. He remained symptomatic with purulent urethral discharge on examination, and the gram-stain smear was again consistent with gonorrhea. He was given 4 g of spectinomycin IM. Cultures of the urethral exudate grew beta-lactamase negative *N. gonorrhoeae* susceptible to penicillin but resistant to spectinomycin.

Symptoms persisted until July 30, when the patient was hospitalized for further evaluation and definitive therapy. A gram-stain smear was still consistent with gonorrhea. Urethral cultures were positive for *N. gonorrhoeae* susceptible to penicillin but resistant to spectinomycin. He was given 4.8 million units of procaine penicillin IM and 1 g of probenecid orally. His symptoms resolved, and cultures of post-treatment urethral specimens were negative.

PPNG cases: Since a September 17 report (*1*), five additional cases of infection with PPNG resistant to spectinomycin have been reported. A spectinomycin-resistant PPNG isolate was obtained in Detroit from a 25-year-old male whose last sexual exposure was to a 30-year-old female in London between July 23 and August 7, 1982. A pretreatment isolate on September 8 was beta-lactamase negative and susceptible to penicillin and spectinomycin. Treatment with tetracycline, followed by ampicillin and probenecid, did not cure the infection. Subsequent urethral cultures grew beta-lactamase-positive, spectinomycin-resistant *N. gonorrhoeae*. The patient was successfully treated with cefotaxime 1 g IM.

Two cases were reported from London in males aged 30 years and 23 years (*2*); Asian-type plasmids were found in both. Two other cases have recently been reported to the Venereal Disease Reference Laboratory in London (*3*).

Reported by AJ Patefield, MD, USAF Hospital, Osan, Korea; WG Westbrook III, MD, USAF Hospital, Yokata, Japan; NA Johnston, Venereal Diseases Reference Laboratory, London; Sexually Transmitted Diseases Laboratory Program, Center for Infectious Diseases, Venereal Diseases Div, Center for Prevention Svcs, CDC.

Editorial Note: Although still uncommon, seven apparently unrelated spectinomycin-resistant gonococcal infections have been identified since summer of 1982. Fourteen cases of spectinomycin-resistant gonorrhea (nine PPNG and five non-PPNG) have been noted worldwide since the first report in 1973 (*4*). Although the increase may reflect only improved surveillance, there is no evidence that surveillance has recently changed in London, where most of the cases have occurred.

The emergence of spectinomycin resistance could be the result of selection associated with increased use of spectinomycin worldwide. However, induction of resistance is another possibility. Pre-treatment isolates were susceptible to spectinomycin, but post-treatment isolates were resistant, emphasizing that resistance may emerge in a single treatment period.

Health care personnel should be aware that not all patients treated with spectinomycin will be cured of gonorrhea. Post-treatment cultures should be an integral part of patient management. All PPNG isolates and isolates from patients with positive cultures after spectinomycin therapy should be tested for spectinomycin susceptibility using a provisional disc-diffusion method (*4*). Patients should be treated with cefoxitin 2 g IM in a single injection plus

Neisseria gonorrhoeae – Continued

probenecid 1 g orally, or cefotaxime 1 g IM in a single injection (*5*).

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Influenza A(H3N2) Virus Isolations — United States

Type A(H3N2) influenza virus, isolated in Alaska earlier this season (*1*), has now been isolated from a woman in New York City, an infant in Oregon, and a 4-year-old child who became ill after returning to Virginia from Hawaii. The woman, a 26-year-old resident of New York City, had onset of influenza on November 17. She had not recently traveled outside the metropolitan area. The male infant, who lived in Corvallis, Oregon, had onset on November 2 of an illness initially suspected to be caused by enteroviral infection. The 4-year-old had returned to Virginia with his family on October 19, after a 7-day vacation to Honolulu, and developed high fever, cough, and malaise on October 20. His illness worsened, and he was lethargic when admitted to a District of Columbia hospital on October 22. The child improved rapidly and was discharged on October 26. On October 18, just before departing from Hawaii, the child's mother had onset of influenze-like illness, and a younger sister had an influenza-like illness concurrent with her brother, but specimens for virus isolation were not collected from either.

Public health officials representing the jurisdictions where these three cases occurred have not reported indications of increased influenza-like illnesses.

Reported by M Helfaer, MD, H Kim, MD, Children's Hospital, M Levy, MD, State Epidemiologist, District of Columbia Dept of Human Svcs; A Valdes Dapena, MD, Bethesda Naval Hospital; T Sayvetz, MD, G Miller, Jr, MD, State Epidemiologist, Virginia State Dept of Health; M Bomgaars, MD, Acting State Epidemiologist, Hawaii State Dept of Health; J Middaugh, MD, State Epidemiologist, Alaska State Dept of Health and Social Svcs; I Spigland, MD, Montefiore Hospital, S Friedman, MD, New York City Dept of Health; W Murphey, PhD, J Googins, MD, State Epidemiologist, Oregon Dept of Human Resources; Influenza Br, Center for Infectious Diseases, CDC.

Reference

1. CDC. Influenza—Alaska. MMWR 1982;31:588.

Notice to Readers

Announcement of International Public Health Symposium

The First International Symposium on Public Health in Asia and the Pacific Basin will be held in Honolulu at the University of Hawaii, March 7-9, 1983. Work sessions will continue March 10-11. The symposium, which begins what will become a series of meetings conducted every 3 to 4 years, is being organized through cooperation of the World Health

Public Health Symposium – Continued

Organization, the Centers for Disease Control and the Public Health Service, the East-West Center, the Association of Schools of Public Health, and the University of Hawaii.

For further information, contact:

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Erratum, Vol. 31, No. 44

p. 602. In the article, "Urban Rat Control—United States, Second Quarter, Fiscal Year 1982," the data for Regions I-III were incorrectly positioned in the table. They should have appeared as below. Additionally, in Region V, the total for "Previously reporting programs" should be 3,173, instead of as published.

Program community	Target-area blocks				Environmentally improved blocks*	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			< 12 months	≥ 12 months		
REGION I	478	240	223	15	59	1,213
Bridgeport	220	120	85	15	0	0
Hartford	258	120	138	0	59	372
Previously reporting programs						841
REGION II	3,395	1,241	993	759	29	5,670
Atlantic City	202	17	78	32	0	0
Camden	332	134	60	38	0	119
Jersey City	183	51	94	38	0	260
Newark	174	16	24	9	27	170
New York City	1,134	412	292	430	0	1,219
Rochester	174	76	71	27	0	494
Yonkers	80	60	20	0	0	145
Aguadilla, P.R.	199	143	50	6	2	256
Arecibo, P.R.	102	36	66	0	0	291
Guayama, P.R.	176	121	55	0	0	40
Mayaguez, P.R.	155	67	72	16	0	239
Ponce, P.R.	226	39	23	62	0	378
San Juan, P.R.	258	69	88	101	0	405
Previously reporting programs						1,654
REGION III	2,421	1,063	704	358	119	8,272
"War on Rats"	852	354	250	67	63	1,385
Chester	160	57	60	43	0	116
N.E. Pa. V.C. Assn.†	526	207	84	120	5	1,369
Philadelphia	883	445	310	128	51	1,697
Previously reporting programs						3,705

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and distributed by the National Technical Information Service, Springfield, Virginia. The data in this report are provisional, based on weekly telegrams to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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CENTERS FOR DISEASE CONTROL

MMWR

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Perspectives in Disease Prevention and Health Promotion

Alcohol-Related Highway Fatalities among Young Drivers — United States

In 1981, 49,268 highway accident deaths involving 62,666 drivers occurred in the United States; young drivers (ages 16 to 24 years), constituting 17% of the U.S. population, were involved in accidents resulting in 48% of the fatalities.[*] A total of 21,431 young drivers accounted for crashes resulting in 23,690 fatalities, and 9,834 of these drivers themselves were killed.

Analysis of 1981 data from the Fatal Accident Reporting System (FARS)[†] shows that alcohol played an important role in fatal highway accidents involving young drivers. In 1981, 4,738 young drivers under the influence of alcohol were killed, and 9,310 persons died in accidents involving these young drivers.

Of the 21,431 young drivers involved in accidents, 8,222 had positive blood alcohol content (BAC) tests or were judged by investigating officers to have alcohol involvement; 4,738 were killed, for a case fatality rate of 58%. The remaining 13,209 were untested or had negative BAC; 5,096 of these were killed, for a case fatality rate of 39 per 100 young drivers with negative or unknown BAC. Thus, young drivers with known alcohol involvement were 49% more likely to be killed than those with zero or unknown alcohol involvement.

For single vehicle accidents, there was a steady, inverse relationship between age and involvement in fatal accidents, regardless of alcohol use (Table 1). Young drivers accounted for 41% of the 25,095 fatal single vehicle accidents, compared with 11% for drivers 55 years or older. Young drivers were involved in nearly 45% of alcohol-related single vehicle accidents, compared with 5.5% for drivers 55 and older. A total of 7,158 fatal, alcohol-related, single vehicle accidents occurred in 1981. A comparison of BAC by driver age for single vehicle accidents shows a greater fraction of young than older drivers with low BAC, (Figure 1).

The overall crude death rate in 1981 was 43.2/100,00 for highway accidents attributable to young people aged 16-24 years, compared with 31.9 for those 25-29 years, 23.7 for 30-34 years, 19.5 for 35-44 years, and 17.9 for those 45 years and older. No crude death rates were computed for drinking driver fatalities, because no reliable way exists for estimating the number of drinking drivers on the road at any given time.

The overall crude death rate attributable to highway traffic fatalities has been relatively stable over the 5-year period 1977-1981. Minor fluctuations in crude rates have occurred for all ages; for most age groups the trend has been slightly downward since 1978-1979 (Table 2). The most noteworthy aspect has been the extreme variablilty between ages in any given year. In 1981, the crude death rate for 16-year-olds was 28.7/100,00 and for 17-, 18-, and

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[*] U.S. Department of Commerce, Bureau of the Census, 1970 and 1980 Census of Population.

[†] Department of Transportation, National Highway Traffic Safety Administration, 1977-1981 data tapes.

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Alcohol-Related Fatalities – Continued

19-year-olds, 40.5, 50,9, and 51.8, respectively. Only after age 35 did the rate decrease below the overall crude rate. This pattern has occurred in all 5 data years, with the crude death rate for 16-24 year olds exceeding the overall rate by more than 2 to 1 in each year.

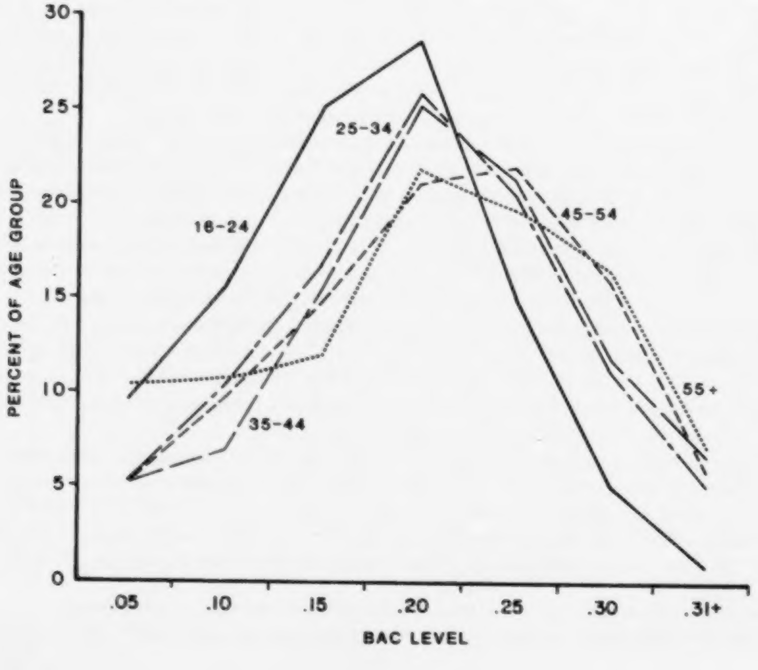
Reported by H Malin, MA, J Trumble, MSW, C Kaelber, MD, B Lubran, MPH, Alcohol Epidemiology Data System, Div of Biometry and Epidemiology, National Institute on Alcohol Abuse and Alcoholism.

Editorial Note: Because testing for BAC is not uniform for all states and police jurisdictions, actual overall alcohol involvement in highway traffic fatalities may be underestimated. In

TABLE 1. Fatal single vehicle accidents, age of driver, and alcohol involvement — United States, 1981

Age group	% United States population	Single vehicle accidents	% Total	Number with alcohol	% in age group with alcohol	% alcohol-involved accidents
16-24	16.5	10,295	41.0	3,190	31.0	44.6
25-34	16.8	6,977	27.8	2,193	31.4	30.6
35-44	11.5	3,165	12.6	902	28.5	12.6
45-54	9.9	2,002	8.0	476	23.8	6.6
55+	21.1	2,656	10.6	397	14.9	5.5
Totals		25,095	100.0	7,158	28.5	100.0

FIGURE 1. Percentage blood alcohol concentration (BAC), by age group — United States, 1981



Alcohol-Related Fatalities – Continued

addition, traffic deaths are only tabulated if they occur within 30 calendar days of the highway traffic accident; thus, deaths are also undercounted. Nevertheless, alcohol-related motor vehicle crashes are the leading cause of death in the 16-24-year age group.

These data, and an awareness of the tragic health and social consequences of the use of alcohol by youth, have led the Department of Health and Human Services to emphasize the need for a combined effort by adults and young people against youth alcohol abuse and to announce an Initiative on Teenage Alcohol Abuse. The Secretarial Initiative, designed to increase public awareness of the seriousness of the problem and to mobilize public and private action, includes the following major activities.

1. A Secretarial Conference for Youth on Drinking and Driving, co-sponsored by the Departments of Education, Transportation, and Agriculture, will be held in Chevy Chase, Maryland, March 26-28, 1983, for young people working to combat drinking and driving. Teenagers across the country will be invited to share experiences on implementing programs in their local communities to reduce alcohol- and drug-related traffic fatalities.
2. A series of 10 regional conferences on prevention and early intervention, held across the country for school personnel, parent groups, and alcohol and drug abuse program personnel, has resulted in a prevention guide, "Prevention Plus: Involving Schools, Parents, and the Community in Alcohol and Drug Education," which will be printed early in 1983.
3. Beginning the summer of 1983, a series of 1-day regional conferences will be held to help communities assess the need for and design comprehensive treatment services for youth.
4. Agencies within the Department of Health and Human Services have been asked to identify activities in research, education, and prevention designed to curb teenage alcohol abuse. In

TABLE 2. Crude death rates* for highway accident fatalities by age groups and by single years of age, 16-24 — United States, 1977-1981

	Crude Death Rates				
	Year				
Age	**1977**	**1978**	**1979**	**1980**	**1981**
Overall	22.1	23.1	23.2	22.6	21.6
16	34.3	34.6	36.8	34.1	28.7
17	44.6	46.6	45.3	43.5	40.5
18	55.4	57.5	58.9	57.7	50.9
19	54.1	57.7	57.5	56.2	51.8
20	51.6	52.2	51.8	50.0	46.9
21	49.4	52.2	51.5	49.6	45.8
22	46.2	49.4	47.4	48.1	44.2
23	40.9	44.3	42.5	44.4	41.3
24	36.2	37.3	40.8	39.3	38.5
16-19	47.0	49.0	49.6	47.9	43.1
20-24	45.0	47.2	46.9	46.3	43.4
16-24	45.9	48.0	48.1	47.0	43.2
25-29	28.8	31.5	32.7	32.1	31.9
30-34	21.7	23.7	24.4	24.3	23.7
35-44	18.6	20.0	20.6	19.8	19.5
45+	19.3	19.3	18.9	19.1	17.9

*Per 100,000 population

Alcohol-Related Fatalities – Continued

addition, the Department will be involved in the "National Drunk and Drugged Driving Awareness Week," December 12-18, 1982.

5. Communication has been established with the World Health Organization to develop a collaborative relationship on the issue.
6. Studies to examine the medical and developmental consequences of youth alcohol consumption are being undertaken.

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Epidemiologic Notes and Reports

Update on Acquired Immune Deficiency Syndrome (AIDS) among Patients with Hemophilia A

In July 1982, three heterosexual hemophilia A patients, who had developed *Pneumocystis carinii* pneumonia and other opportunistic infections, were reported (*1*). Each had in vitro evidence of lymphopenia and two patients who were specifically tested had evidence of T-lymphocyte abnormalities. All three have since died. In the intervening 4 months, four additional heterosexual hemophilia A patients have developed one or more opportunistic infections accompanied by in-vitro evidence of cellular immune deficiency; these four AIDS cases and one highly suspect case are presented below. Data from inquiries about the patients' sexual activities, drug usage, travel, and residence provide no suggestion that disease could have been acquired through contact with each other, with homosexuals, with illicit drug abusers, or with Haitian immigrants—groups at increased risk for AIDS compared with the general U.S. population. All these patients have received Factor VIII concentrates, and all but one have also received other blood components.

Case 1: A 55-year-old severe hemophiliac from Alabama developed anorexia and progressive weight loss beginning in September 1981. He had developed adult-onset diabetes mellitus in 1973, which had required insulin therapy since 1978. He had had acute hepatitis (type unknown) in 1975. In March 1982, he was hospitalized for herpes zoster and a 17-kg weight loss. Hepatosplenomegaly was noted. The absolute lymphocyte count was 450/mm^3. Liver enzymes were elevated; antibodies to hepatitis B core and surface antigens were present. A liver biopsy showed changes consistent with persistent hepatitis. Evaluation for an occult malignancy was negative. The zoster resolved following 5 days of adenosine arabinoside therapy.

In early June, he was readmitted with fever and respiratory symptoms. Chest x-ray showed bibasilar infiltrates. No causative organism was identified, but clinical improvement occurred coincident with administration of broad spectrum antibiotics. Laboratory studies as an outpatient documented transient thrombocytopenia (63,000/mm^3) and persistent inversion of his T-helper/T-suppressor ratio ($T_H/T_S = 0.2$). He was readmitted for the third time in early September with fever, chills and nonproductive cough. His cumulative weight loss was now 47 kg. Chest x-ray demonstrated bilateral pneumonia, and open lung biopsy showed infection with *P. carinii.* He responded to sulfamethoxazole/trimethoprim (SMZ/TMP). His T-cell defects persist.

Case 2: A 10-year-old severe hemophiliac from Pennsylvania had been treated with Factor VIII concentrate on a home care program. He had never required blood transfusion. He had been remarkably healthy until September 1982 when he experienced intermittent episodes of fever and vomiting. Approximately 2 weeks later, he also developed persistent anorexia, fatigue, sore throat, and nonproductive cough. On October 20, he was admitted to a hospital with a temperature of 38.4 C (101.2 F) and a respiratory rate of 60/min. Physical examination revealed cervical adenopathy but no splenomegaly. The absolute number of circulating lymphocytes was low (580/mm^3) and the T-helper/T-suppressor ratio was markedly reduced ($T_H/T_S = 0.1$). His platelet count was 171,000/mm^3. Serum levels of IgG, IgA, and IgM were markedly elevated. Chest x-rays showed bilateral pnuemonia and an open lung biopsy revealed massive infiltration with *P. carinii* and *Cryptococcus neoformans.* Intravenous SMZ/TMP and amphotericin B have led to marked clinical improvement, but the T-cell abnormalities persist.

Case 3: A 49-year-old patient from Ohio with mild hemophilia had been treated relatively infrequently with Factor VIII concentrate. During the summer of 1982, he noted dysphagia and a weight loss of approximately 7 kg. In October, he was treated for cellulitis of the right hand. Two weeks later, he was observed by a close relative to be dyspneic. He was admitted in November with progressive dyspnea and diaphoresis. Chest x-rays suggested diffuse pneumonitis. His WBC count was 11,000/mm^3 with 9% lymphocytes (absolute lymphocyte number 990/mm^3). The T_H/T_S ratio was 0.25. Open lung biopsy revealed *P. carinii.* The patient was treated with SMZ/TMP for 6 days with no improvement, and pentamidine isethionate was added. Virus cultures of sputum and chest tube drainage revealed herpes simplex virus. He died on November 22.

Case 4: A 52-year-old severe hemophiliac from Missouri was admitted to a hospital in April 1982 with fever, lymphadenopathy, and abdominal pain. Persistently low numbers of circulating lymphocytes were noted (480/mm^3). Granulomata were seen on histopathologic examination of a bone marrow aspirate. Cultures were positive for *Histoplasma capsulatum.* The patient improved after therapy with amphotericin B. During the following summer and early fall, he developed fever, increased weight loss, and difficulty thinking. On readmission in early November, he had esophageal candidiasis. Laboratory tests showed profound leukopenia and lymphopenia. A brain scan showed a left frontal mass, which was found to be an organizing hematoma at the time of craniotomy. A chest x-ray showed "fluffy" pulmonary infiltrates. Therapy with SMZ/TMP was begun. Exploratory laparotomy revealed no malignancy. A splenectomy was performed. Biopsies of liver, spleen, and lymph node tissues were negative for *H capsulatum* granulomata. The lymphoid tissue including the spleen showed an absence of lymphocytes. His total WBC declined to 400/mm^3 and the T_H/T_S cell ratio was 0.1. He died shortly thereafter.

Suspect Case: Described below is an additional highly suspect case that does not meet the strict criteria defining AIDS. A 7-year-old severe hemophiliac from Los Angeles had mild mediastinal adenopathy on chest x-ray in September 1981. In March 1982, he developed a spontaneous subdural hematoma requiring surgical evacuation. In July, he developed parotitis. In August, he developed pharyngitis and an associated anterior and posterior cervical adenopathy, which has not resolved. In late September, he developed herpes zoster over the right thigh and buttock, and oral candidiasis . Chest x-rays revealed an increase of the mediastinal adenopathy and the appearance of new perihilar infiltrates. In late October, enlarge-

Acquired Immune Deficiency Syndrome – Continued

ment of the cervical nodes led to a lymph node biopsy. Architectural features of the node were grossly altered, with depletion of lymphocytes. Heterophile tests were negative. IgG, IgA, and IgM levels were all elevated. He has a marked reduction in T-helper cells and a T_H/T_S ratio equal to 0.4. Recent progressive adenoid enlargement has caused significant upper airway obstruction and resultant sleep apnea.

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Editorial Note: These additional cases of AIDS among hemophilia A patients share several features with the three previously reported cases. All but one are severe hemophiliacs, requiring large amounts of Factor VIII concentrate. None had experienced prior opportunistic infections. All have been profoundly lymphopenic (< 1000 lymphocytes/mm^3) and have had irreversible deficiencies in T-lymphocytes. Clinical improvement of opportunistic infections with medical therapy has been short lived. Two of the five have died.

(Continued on page 652)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		48th Week Ending			Cumulative, First 48 Weeks		
		December 4, 1982	December 5, 1981	Median 1977-1981	December 4, 1982	December 5, 1981	Median 1977-1981
Aseptic meningitis		216	125	127	8,506	8,931	7,262
Brucellosis		1	3	3	147	163	167
Encephalitis	Primary (arthropod-borne & unspec.)	38	17	20	1,347	1,393	1,113
	Post-infectious	-	3	3	55	86	202
Gonorrhea	Civilian	16,795	17,956	19,839	881,075	923,109	923,923
	Military	289	770	461	23,944	25,597	24,753
Hepatitis	Type A	470	518	556	20,940	23,303	26,940
	Type B	431	487	340	19,870	19,050	15,066
	Non A, Non B	56	N	N	2,162	N	N
	Unspecified	173	230	222	8,135	9,988	9,613
Legionellosis		13	N	N	503	N	N
Leprosy		2	11	7	186	233	160
Malaria		23	21	21	965	1,279	725
Measles (rubeola)		4	35	112	1,583	2,891	13,255
Meningococcal infections	Total	42	64	49	2,705	3,229	2,385
	Civilian	42	63	49	2,692	3,216	2,365
	Military	-	1	-	13	13	18
Mumps		111	182	243	4,855	4,266	12,833
Pertussis		55	19	34	1,608	1,135	1,568
Rubella (German measles)		19	29	89	2,189	1,966	11,304
Syphilis (Primary & Secondary)	Civilian	563	598	515	30,265	28,595	23,032
	Military	2	5	6	405	351	290
Tuberculosis		576	533	596	23,690	25,101	25,261
Tularemia		4	9	4	234	260	178
Typhoid fever		3	8	12	368	530	488
Typhus fever, tick-borne (RMSF)		4	5	5	986	1,180	1,109
Rabies, animal		116	108	77	5,736	6,730	4,672

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	7
Botulism (Calif. 1)	76	Paralytic (Ind. 1, Wash. 1)	7
Cholera	-	Psittacosis	113
Congenital rubella syndrome	6	Rabies, human	-
Diphtheria	3	Tetanus	74
Leptospirosis	67	Trichinosis (N.J. 1)	82
Plague	18	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	40

TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 4, 1982 and December 5, 1981 (48th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	216	147	1,347	56	881,075	923,109	470	431	56	173	13	186
NEW ENGLAND	5	3	52	6	21,409	22,370	11	26	2	14	3	2
Maine	-	-	-	-	1,119	1,204	1	1	-	-	1	-
N.H.	-	-	8	-	693	832	2	1	-	-	-	-
Vt.	1	-	-	-	394	409	-	1	1	-	-	-
Mass.	1	-	22	-	9,530	9,433	3	4	1	13	-	-
R.I.	3	-	-	1	1,422	1,367	3	3	-	-	-	-
Conn.	-	3	22	5	8,251	9,125	2	16	-	1	2	2
MID. ATLANTIC	33	3	140	14	111,880	111,362	75	118	6	18	-	9
Upstate N.Y.	16	3	59	3	18,705	19,636	9	13	4	8	-	1
N.Y. City	2	-	19	-	46,115	45,328	9	58	-	3	-	6
N.J.	8	-	23	-	20,085	20,914	25	21	2	6	-	1
Pa.	7	-	39	11	26,975	25,484	32	26	-	1	-	1
E.N. CENTRAL	15	4	337	12	124,134	137,043	37	28	3	1	1	10
Ohio	10	1	133	5	33,239	42,808	16	11	1	-	-	-
Ind.	2		91	3	15,369	11,402	1	1	-	-	-	-
Ill.	-	2	15	2	33,886	39,914	6	5	2	1	-	8
Mich.	3	1	69		30,426	30,331	14	11	-	-	1	-
Wis.			29	2	11,214	12,588	-	-	-		-	2
W.N. CENTRAL	10	17	98	4	41,506	44,546	7	10	2	-	1	7
Minn.	-	1	27	1	6,008	6,911	1	3	1	-	-	4
Iowa	2	5	52	1	4,440	4,936	-	2	-	-	-	-
Mo.	5	4	8	-	19,653	20,734	4	4	1	-	-	1
N. Dak.	-	1	-	-	540	560	-	-	-	-	-	-
S. Dak.	-	1	-	1	1,068	1,187	-	-	-	-	-	1
Nebr.	2	2	6	-	2,448	3,341	2	1	-	-	1	1
Kans.	1	3	5	1	7,349	6,877	-	-	-	-	-	-
S. ATLANTIC	58	28	193	8	231,477	227,379	47	77	13	20	2	11
Del.	-	-	-		3,837	3,651	1	5	-	-		-
Md.	1	-	25	-	28,793	27,123	12	21	4	2	1	4
D.C.	-	-		-	14,038	12,982	1		-	3		-
Va.	5	10	40	1	18,668	20,857	4	8	4	3		1
W. Va.	-	-	16	-	2,587	3,363	1	2	-	-	-	-
N.C.	13	-	29	1	36,492	35,162	2	7	-	4	-	-
S.C.	1	2	2	-	22,432	22,096	4	9	-	1	-	-
Ga.	1	3	14	-	45,887	47,236	3	3	-	-	-	1
Fla.	37	13	67	6	58,743	54,909	19	22	5	7	1	5
E.S. CENTRAL	10	12	66	3	76,328	77,072	20	22	4	1	-	-
Ky.	-	-	1	-	10,262	9,662	5	1	-	1	-	-
Tenn.	5	7	30	-	30,000	29,302	9	11	3	-	-	-
Ala.	4	4	19	3	22,433	23,091	4	7	1	-	-	-
Miss.	1	1	16	-	13,633	15,017	2	3	-	-	-	-
W.S. CENTRAL	23	45	211	1	121,809	121,568	80	34	5	66	2	27
Ark.		7	19	-	9,923	9,280	3	5	-	18	2	-
La.	1	8	27	-	22,660	21,575	1	-	-	-	-	-
Okla.	2	8	38	-	13,363	13,348	17	6	5	6	-	-
Tex.	20	22	127	1	75,863	77,365	59	23		42	-	27
MOUNTAIN	6	4	55	2	29,702	36,449	52	15	3	18	3	2
Mont.		3	-	-	1,251	1,331	3	-	-	-	-	-
Idaho	-	1	-	-	1,413	1,603	1	-	-	-	-	1
Wyo.	-	-	1	-	893	955	2	-	-	1	-	-
Colo.	3	-	19	1	7,960	9,771	12	4	2	2	-	
N. Mex.	1	-	1	-	4,077	4,142	4	-	1	-	1	
Ariz.	-	-	11	-	7,731	10,763	16	8	-	12	1	-
Utah	2		18	1	1,458	1,809	14	3	-	-	1	1
Nev.	-	-	5	-	4,919	6,075	-	-	-	3	-	-
PACIFIC	56	31	195	6	122,830	145,320	141	101	18	35	1	118
Wash.	1	1	13	-	10,587	12,146	12	4	1	-	1	9
Oreg.	1	-	4	-	7,350	8,578	10	4	-	1	-	1
Calif.	35	29	162	6	99,320	118,022	119	92	16	34	-	76
Alaska	-	1	10	-	3,184	3,756	-	-	-	-	-	1
Hawaii	19	-	6	-	2,389	2,818	-	1	1	-	-	31
Guam	U	-	-	1	107	111	U	U	U	U	U	1
P.R.	-	-	1	3	2,336	3,028	13	3	-	2	-	3
V.I.	-	-	-	-	228	244	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	388	419	U	U	U	U	U	44

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 4, 1982 and December 5, 1981 (48th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum 1982	1982	Cum 1982	Cum 1981	1982	Cum 1982	1982	Cum 1982	1982	1982	Cum 1982	Cum 1981
UNITED STATES	23	965	4	1,583	2,891	42	2,705	111	4,855	55	19	2,189	1,966
NEW ENGLAND	1	50	-	16	85	1	147	2	190	-	-	21	120
Maine	-	-	-	-	5	-	10	-	43	-	-	-	33
N.H.	-	2	-	3	8	-	18	-	18	-	-	11	51
Vt	-	-	-	2	3	-	11	-	7	-	-	-	-
Mass	-	28	-	5	59	-	41	1	82	-	-	4	23
R.I.	-	3	-	-	-	-	16	-	17	-	-	1	-
Conn	1	17	-	6	10	1	51	1	23	-	-	5	13
MID. ATLANTIC	8	165	1	167	954	11	490	11	328	41	3	107	229
Upstate N.Y.	2	31	-	113	221	3	168	3	91	17	2	52	114
N.Y. City	5	66	-	43	103	-	93	-	47	-	-	35	55
N.J.	-	31	-	6	58	4	101	-	52	-	-	18	47
Pa	1	37	1	5	572	4	128	8	138	24	1	2	13
E.N. CENTRAL	1	85	-	77	90	4	351	70	2,442	5	3	196	416
Ohio	-	13	-	1	20	2	123	62	1,699	-	2	4	3
Ind	1	4	-	2	9	-	36	1	44	-	-	29	137
Ill	-	36	-	24	25	2	91	1	202	3	1	73	113
Mich	-	26	-	50	33	-	78	5	376	2	-	49	40
Wis	-	6	-	-	3	-	23	1	121	-	-	41	123
W.N. CENTRAL	-	31	-	49	10	2	138	8	625	1	2	62	80
Minn	-	4	-	-	3	-	32	2	456	-	1	7	8
Iowa	-	8	-	-	1	-	12	2	53	-	-	-	4
Mo	-	10	-	2	1	1	41	-	20	1	-	38	2
N. Dak	-	2	-	-	-	-	6	-	-	-	-	-	-
S. Dak	-	-	-	-	-	-	8	-	1	-	-	1	-
Nebr	-	4	-	3	4	-	14	-	1	-	-	-	1
Kans	-	3	-	44	1	1	25	4	94	-	1	16	65
S. ATLANTIC	-	127	-	168	482	9	565	8	292	4	2	95	144
Del	-	4	-	-	-	-	1	-	12	2	-	1	1
Md	-	20	-	4	5	1	41	2	32	-	-	34	1
D.C.	-	4	-	1	1	1	5	-	-	-	-	-	-
Va	-	39	-	14	9	1	68	-	39	-	-	13	6
W. Va	-	7	-	3	9	-	10	4	102	1	-	3	22
N.C.	-	8	-	1	3	2	110	-	20	-	-	2	5
S.C.	-	4	-	-	2	3	69	-	17	-	-	1	8
Ga	-	16	-	-	111	-	109	2	24	-	-	17	39
Fla	-	25	-	145	342	1	152	-	46	1	2	24	62
E.S. CENTRAL	1	10	-	9	6	2	162	1	64	-	-	47	40
Ky	-	5	-	1	2	-	25	-	20	-	-	29	26
Tenn	-	-	-	6	2	1	71	-	25	-	-	2	13
Ala	1	2	-	2	2	1	53	1	10	-	-		1
Miss	-	3	-	-	-	-	13	-	9	-	-	16	-
W.S. CENTRAL	1	65	3	173	874	5	313	2	229	1	-	120	185
Ark	1	5	-	-	23	1	16	-	7	-	-	1	7
La	-	5	3	14	4	-	63	-	6	-	-	1	9
Okla	-	8	-	30	6	1	31	-	-	-	-	3	3
Tex	-	47	-	129	841	3	203	2	216	1	-	115	166
MOUNTAIN	-	30	-	28	38	-	116	4	112	3	1	83	96
Mont	-	1	-	-	-	-	7	1	6	-	1	6	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	7	4
Wyo	-	-	-	1	1	-	5	-	2	1	-	7	12
Colo	-	12	-	7	11	-	48	-	18	1	-	6	30
N. Mex	-	3	-	-	8	-	15	-	-	1	-	6	5
Ariz	-	8	-	17	7	-	21	3	54	-	-	16	22
Utah	-	4	-	3	-	-	11	-	20	-	-	23	9
Nev	-	-	-	-	10	-	2	-	8	-	-	12	11
PACIFIC	11	402	-	896	352	8	423	5	573	-	8	1,458	656
Wash	-	24	-	42	3	-	49	-	79	-	1	41	93
Oreg	1	15	-	24	5	1	76	-	-	-	-	6	53
Calif	10	355	-	824	337	7	283	4	461	-	7	1,397	494
Alaska	-	1	-	1	-	-	11	-	12	-	-	5	1
Hawaii	-	7	-	5	7	-	4	1	21	-	-	9	15
Guam	U	1	U	6	6	U	2	U	5	U	U	2	3
P.R.	-	4	2	136	301	-	8	8	98	1	-	12	5
V.I.	-	-	-	-	24	-	-	-	3	-	-	2	1
Pac. Trust Terr	U	-	U	1	1	U	5	U	6	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 4, 1982 and December 5, 1981 (48th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	30,265	28,595	576	23,690	234	3	368	4	986	5,736
NEW ENGLAND	555	538	34	687	7	-	18	-	11	42
Maine	7	5	-	53	-	-	-	-	-	26
N.H.	5	16	4	30	-	-	-	-	1	1
Vt.	4	17	-	10	-	-	2	-	-	2
Mass.	373	342	25	437	7	-	14	-	6	7
R.I.	24	33	3	31	-	-	-	-	2	-
Conn.	142	125	2	126	-	-	2	-	2	6
MID. ATLANTIC	4,046	4,102	61	3,984	7	2	66	-	45	196
Upstate N.Y.	401	422	10	679	7	2	11	-	16	108
N.Y. City	2,411	2,416	20	1,528	-	-	35	-	3	-
N.J.	589	577	11	776	-	-	12	-	14	17
Pa.	645	687	20	1,001	-	-	8	-	12	21
E.N. CENTRAL	1,730	2,173	75	3,586	1	1	35	1	85	570
Ohio	291	299	11	577	-	-	12	1	77	79
Ind.	192	275	8	433	-	-	2	-	2	72
Ill.	880	1,165	36	1,569	-	-	7	-	6	292
Mich.	274	348	12	804	-	1	11	-	-	6
Wis.	93	86	8	203	1	-	3	-	-	121
W.N. CENTRAL	513	632	18	705	38	-	16	-	34	1,145
Minn.	132	183	7	133	-	-	8	-	-	196
Iowa	32	29	2	71	3	-	1	-	4	374
Mo.	275	363	8	336	25	-	4	-	13	117
N. Dak.	7	11	-	15	-	-	-	-	-	93
S. Dak.	2	2	-	30	1	-	-	-	4	101
Nebr.	14	10	-	29	4	-	2	-	2	122
Kans.	51	34	1	91	5	-	1	-	11	142
S. ATLANTIC	8,315	7,590	138	4,918	13	-	45	1	516	1,199
Del.	24	13	3	45	-	-	-	-	-	2
Md.	455	542	24	575	1	-	10	1	50	75
D.C.	459	613	2	237	-	-	-	-	-	-
Va.	567	650	37	570	5	-	4	-	73	676
W. Va.	30	27	2	142	-	-	4	-	8	48
N.C.	676	605	20	724	-	-	3	-	222	65
S.C.	527	523	13	479	6	-	3	-	106	65
Ga.	1,730	1,836	11	784	-	-	-	-	51	200
Fla.	3,847	2,781	26	1,362	1	-	21	-	6	68
E.S. CENTRAL	2,089	1,869	39	2,142	8	-	20	-	96	622
Ky.	126	98	16	566	-	-	4	-	1	125
Tenn.	595	857	7	695	6	-	4	-	59	347
Ala.	778	558	11	585	-	-	9	-	17	143
Miss.	590	556	5	296	2	-	3	-	19	7
W.S. CENTRAL	7,995	6,880	104	2,888	118	-	39	2	159	1,115
Ark.	210	151	11	338	72	-	8	-	22	152
La.	1,727	1,569	13	447	3	-	3	-	2	31
Okla.	177	165	14	316	33	-	3	-	76	188
Tex.	5,881	4,995	66	1,787	10	-	25	2	59	744
MOUNTAIN	766	707	9	656	32	-	14	-	14	270
Mont.	5	11	-	39	5	-	-	-	5	88
Idaho	25	18	1	29	1	-	-	-	4	11
Wyo.	16	17	-	6	5	-	-	-	1	21
Colo.	213	217	-	90	7	-	3	-	1	48
N. Mex.	181	125	2	110	3	-	-	-	1	23
Ariz.	207	170	4	276	-	-	8	-	-	57
Utah	21	27	2	43	11	-	2	-	-	18
Nev.	98	122	-	63	-	-	1	-	2	4
PACIFIC	4,256	4,104	98	4,124	10	-	115	-	6	577
Wash.	146	180	13	262	1	-	7	-	-	8
Oreg.	107	111	2	179	2	-	4	-	1	5
Calif.	3,883	3,731	82	3,358	6	-	100	-	5	481
Alaska	15	12	-	80	1	-	1	-	-	83
Hawaii	105	70	1	245	-	-	3	-	-	-
Guam	1	-	U	38	-	U	-	U	-	-
P.R.	724	593	2	431	-	-	3	-	-	48
V.I.	24	16	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	114	-	U	1	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending December 4, 1982 (48th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	733	498	163	29	15	28	43
Boston, Mass	188	115	50	7	6	10	19
Bridgeport, Conn	43	34	5	2	-	2	2
Cambridge, Mass	31	22	8	1	-	-	2
Fall River, Mass	39	30	7	1	1	-	1
Hartford, Conn	66	43	13	6	1	3	2
Lowell, Mass	32	22	7	-	1	2	1
Lynn, Mass	31	26	3	1	-	1	-
New Bedford, Mass	31	26	3	-	1	1	2
New Haven, Conn	59	38	15	1	3	2	1
Providence, R.I.	76	53	19	-	1	3	5
Somerville, Mass	13	12	1	-	-	-	-
Springfield, Mass	34	22	8	2	-	2	1
Waterbury, Conn	38	21	14	3	-	-	3
Worcester, Mass	52	34	10	5	1	2	4
MID. ATLANTIC	2,682	1,782	603	187	56	54	89
Albany, N.Y.	44	29	7	1	2	5	1
Allentown, Pa	20	17	2	1	-	-	-
Buffalo, N.Y.	130	78	36	9	3	4	5
Camden, N.J.	49	27	11	5	1	5	2
Elizabeth, N.J.	39	34	3	1	-	1	2
Erie, Pa.†	39	29	7	1	2	-	2
Jersey City, N.J.	59	33	20	4	2	-	-
N.Y. City, N.Y.	1,521	1,002	339	123	33	24	45
Newark, N.J.	72	40	20	10	-	2	6
Paterson, N.J.	37	30	5	1	1	-	2
Philadelphia, Pa.†	156	94	43	10	5	4	5
Pittsburgh, Pa.†	100	61	30	6	1	2	3
Reading, Pa	36	28	6	1	1	-	3
Rochester, N.Y.	124	87	25	7	1	4	7
Schenectady, N.Y.	34	27	6	-	-	1	1
Scranton, Pa.†	22	15	7	-	-	-	3
Syracuse, N.Y.	97	73	18	2	3	1	1
Trenton, N.J.	38	29	8	1	-	-	-
Utica, N.Y.	29	23	4	-	1	1	-
Yonkers, N.Y.	36	26	6	4	-	-	1
E.N. CENTRAL	2,457	1,555	553	189	71	89	72
Akron, Ohio	85	62	12	6	1	4	-
Canton, Ohio	42	30	3	4	4	1	2
Chicago, Ill	511	288	129	52	14	28	15
Cincinnati, Ohio	189	136	38	8	-	7	15
Cleveland, Ohio	168	89	48	15	5	11	3
Columbus, Ohio	89	50	23	9	2	5	1
Dayton, Ohio	143	91	35	9	2	6	2
Detroit, Mich	274	165	59	36	10	4	7
Evansville, Ind	61	31	19	7	4	-	-
Fort Wayne, Ind	66	43	13	4	5	1	1
Gary, Ind	14	10	2	1	-	1	-
Grand Rapids, Mich	77	49	18	2	4	4	1
Indianapolis, Ind	187	126	42	10	2	7	5
Madison, Wis	30	22	3	4	1	-	2
Milwaukee, Wis	184	140	32	5	5	2	7
Peoria, Ill	30	21	7	-	1	1	3
Rockford, Ill	66	48	12	2	3	1	3
South Bend, Ind	68	44	16	4	3	1	2
Toledo, Ohio §	107	67	31	5	1	3	2
Youngstown, Ohio	66	43	11	6	4	2	1
W.N. CENTRAL	784	518	165	50	28	23	41
Des Moines, Iowa	67	47	13	4	2	1	10
Duluth, Minn	22	17	3	1	1	-	1
Kansas City, Kans	40	23	7	4	2	4	1
Kansas City, Mo	121	72	38	4	6	1	6
Lincoln, Nebr	36	26	5	3	2	-	1
Minneapolis, Minn	101	62	23	7	3	6	2
Omaha, Nebr	88	58	19	6	3	2	4
St. Louis, Mo	169	106	38	11	7	7	7
St. Paul, Minn	54	41	6	4	2	1	2
Wichita, Kans	86	66	13	6	-	1	7
S. ATLANTIC	1,439	874	358	93	45	67	51
Atlanta, Ga	151	97	31	11	5	7	2
Baltimore, Md	234	136	64	18	8	8	7
Charlotte, N.C.	82	46	24	4	4	4	3
Jacksonville, Fla	136	83	39	5	4	3	5
Miami, Fla	164	95	44	12	4	9	3
Norfolk, Va	49	20	15	7	5	2	3
Richmond, Va	87	49	23	7	2	6	5
Savannah, Ga	43	29	7	3	3	1	1
St. Petersburg, Fla	115	95	16	1	-	3	4
Tampa, Fla	107	68	22	3	3	11	9
Washington, D.C.	215	122	57	19	5	12	3
Wilmington, Del	56	34	16	3	2	1	6
E.S. CENTRAL	732	480	169	41	26	16	29
Birmingham, Ala	120	73	33	9	5	-	2
Chattanooga, Tenn	68	48	8	7	4	1	5
Knoxville, Tenn	51	37	6	2	4	2	3
Louisville, Ky	136	85	36	4	5	6	4
Memphis, Tenn	154	102	42	6	3	1	9
Mobile, Ala	55	32	13	7	2	1	2
Montgomery, Ala	37	25	6	1	2	3	3
Nashville, Tenn	111	78	25	5	1	2	1
W.S. CENTRAL	1,654	949	421	134	73	76	55
Austin, Tex	74	45	20	6	2	1	5
Baton Rouge, La	40	23	9	4	3	1	-
Corpus Christi, Tex	28	20	6	-	-	2	-
Dallas, Tex	223	131	58	10	17	7	5
El Paso, Tex	62	40	13	4	2	3	3
Fort Worth, Tex	80	53	20	4	2	1	4
Houston, Tex	522	263	149	59	25	26	16
Little Rock, Ark	86	49	30	3	2	2	8
New Orleans, La	149	83	42	12	6	6	-
San Antonio, Tex	238	145	42	22	10	19	10
Shreveport, La	47	31	10	3	-	3	-
Tulsa, Okla	105	66	22	7	4	5	4
MOUNTAIN	714	439	168	55	25	27	24
Albuquerque, N.Mex	94	55	26	6	4	3	4
Colo. Springs, Colo	50	34	11	4	1	-	5
Denver, Colo	130	86	26	6	7	5	4
Las Vegas, Nev	88	40	30	9	5	4	3
Ogden, Utah	30	21	5	2	-	2	-
Phoenix, Ariz	167	98	40	18	6	5	2
Pueblo, Colo	28	22	3	2	-	1	-
Salt Lake City, Utah	49	35	8	1	-	5	1
Tucson, Ariz	78	48	19	7	2	2	5
PACIFIC	1,681	1,113	370	103	46	48	100
Berkeley, Calif	17	12	5	-	-	-	1
Fresno, Calif	96	70	18	3	2	3	6
Glendale, Calif	18	11	6	1	-	-	1
Honolulu, Hawaii	98	51	29	7	6	3	13
Long Beach, Calif	78	52	13	7	1	5	2
Los Angeles, Calif	332	214	77	22	11	7	14
Oakland, Calif	75	50	14	6	4	1	5
Pasadena, Calif	38	29	3	2	2	2	5
Portland, Oreg	117	89	18	4	5	1	5
Sacramento, Calif	73	36	25	6	2	4	3
San Diego, Calif	176	118	43	9	3	3	11
San Francisco, Calif	163	100	39	16	2	6	5
San Jose, Calif	167	107	40	9	4	7	18
Seattle, Wash	135	103	19	7	2	4	6
Spokane, Wash	49	34	11	2	2	-	1
Tacoma, Wash	51	37	10	2	-	2	4
TOTAL	12,876††	8,208	2,970	881	385	428	504

---

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality July 1982		Estimated number of physician contacts July 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	164,690	837.6	91,599,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	8,990	45.7	5,374,000
Malignant neoplasms (140-208)	1,804,120	37,100	188.7	2,101,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	61,720	313.9	5,256,000
Suicides, homicides (E950-E978)	1,401,880	4,210	21.4	–
Chronic liver disease and cirrhosis (571)	301,070	2,240	11.4	159,000
Cerebrovascular diseases (430-438)	280,430	12,860	65.4	646,000
Pneumonia and influenza[5] (480-487)	124,830	3,850	19.6	572,000
Diabetes mellitus (250)	117,340	2,670	13.6	2,597,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	4,950	25.2	900,000
Prenatal care[6]				2,137,000
Infant mortality[6]		3,300	10.0/1,000 live births	

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[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the midpoint of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 8, November 15, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 7, October 7, 1982, p.1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 8, November 15, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, July 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] Data for "infectious diseases and their sequelae" as a cause of death and physician visits comparable to other multiple-code categories (e.g., "malignant neoplasms") are not presently available.

[6] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 31, No. 7, October 7, 1982, p.1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Acquired Immune Deficiency Syndrome — Continued

In most instances, these patients have been the first AIDS cases in their cities, states, or regions. They have had no known common medications, occupations, habits, types of pets, or any uniform antecedent history of personal or family illnesses with immunological relevance.

Although complete information is not available on brands and lot numbers for the Factor VIII concentrate used by these additional five patients during the past few years, efforts to collect and compare these data with information obtained from the earlier three cases are under way. No common lot number has been found among the lots of Factor VIII given to the five patients from whom such information is currently available.

These additional cases provide important perspectives on AIDS in U.S. hemophiliacs. Two of the patients described here are 10 years of age or less, and children with hemophilia must now be considered at risk for the disease. In addition, the number of cases continues to increase, and the illness may pose a significant risk for patients with hemophilia.

The National Hemophilia Foundation and CDC are now conducting a national survey of hemophilia treatment centers to estimate the prevalence of AIDS-associated diseases during the past 5 years and to provide active surveillance of AIDS among patients with hemophilia.

Physicians are encouraged to continue to report AIDS-suspect diseases among hemophilia patients to the CDC through local and state health departments.

Reference

1. CDC. *Pneumocystis carinii* pneumonia among persons with hemophilia A. MMWR 1982; 31:365-7.

Possible Transfusion-Associated Acquired Immune Deficiency Syndrome (AIDS) — California

CDC has received a report of a 20-month old infant from the San Francisco area who developed unexplained cellular immunodeficiency and opportunistic infection. This occurred after multiple transfusions, including a transfusion of platelets derived from the blood of a male subsequently found to have the acquired immune deficiency syndrome (AIDS).

The infant, a white male, was delivered by caesarian section on March 3, 1981. The estimated duration of pregnancy was 33 weeks; and the infant weighed 2850 g. The mother was known to have developed Rh sensitization during ner first pregnancy, and amniocentesis done during this, her second, pregnancy showed the fetus had erythroblastosis fetalis. The infant had asphyxia at birth and required endotracheal intubation. Because of hyperbilirubinemia, six double-volume exchange transfusions were given over a 4-day period. During the 1-month hospitalization following birth, the infant received blood products, including whole blood, packed red blood cells, and platelets from 19 donors. All blood products were irradiated.

After discharge in April 1981, the infant appeared well, although hepatosplenomegaly was noted at age 4 months. At 7 months, he was hospitalized for treatment of severe otitis media. Oral candidiasis developed following antibiotic therapy and persisted. At 9 months of age, he developed anorexia, vomiting, and then jaundice. Transaminase levels were elevated, and serologic tests for hepatitis A and B viruses and cytomegalovirus were negative; non-A non-B hepatitis was diagnosed.

At 14 months of age, the infant developed neutropenia and an autoimmune hemolytic anemia and thrombocytopenia. Immunologic studies showed elevated serum concentrations of IgG, IgA, and IgM, decreased numbers of T-lymphocytes, and impaired T-cell function in vitro. Following these studies, he was begun on systemic corticosteroid therapy for his hematologic disease. Three months later, a bone marrow sample, taken before steroid therapy began, was positive for *Mycobacterium avium-intracellulare*. Cultures of urine and gastric aspirate, taken while the infant received steroids, also grew *M. avium-intracellulare*. The infant is now receiving chemotherapy for his mycobacterial infection. He continues to have thrombocytopenia.

The parents and brother of the infant are in good health. The parents are heterosexual non-Haitians and do not have a history of intravenous drug abuse. The infant had no known personal contact with an AIDS patient.

Investigation of the blood products received by the infant during his first month of life has revealed that one of the 19 donors was subsequently reported to have AIDS. The donor, a 48-year-old white male resident of San Francisco, was in apparently good health when he donated blood on March 10, 1981. Platelets derived from this blood were given to the infant on March 11. Eight months later, the donor complained of fatigue and decreased appetite. On examination, he had right axillary lymphadenopathy, and cotton-wool spots were seen in the retina of the left eye. During the next month, December 1981, he developed fever and severe tachypnea and was hospitalized with biopsy-proven *Pneumocystis carinii* pneumonia.

Although he improved on antimicrobial therapy and was discharged after a 1-month hospitalization, immunologic studies done in March 1982 showed severe cellular immune dysfunction typical of AIDS. In April 1982, he developed fever and oral candidiasis, and began to lose weight. A second hospitalization, beginning in June 1982, was complicated by *Salmonella* sepsis, perianal herpes simplex virus infection, encephalitis of unknown etiology, and disseminated cytomegalovirus infection. He died in August 1982.

Reported by A Ammann, MD, M Cowan, MD, D Wara, MD, Dept of Pediatrics, Univeristy of California at San Francisco, H Goldman, MD, H Perkins, MD, Irwin Memorial Blood Bank, R Lanzerotti, MD, J Gullett, MD, A Duff, MD, St. Francis Memorial Hospital, S Dritz, MD, City/County Health Dept, San Francisco, J Chin, MD, State Epidemiologist, Calfornia State Dept. of Health Svcs.; Field Svcs Div, Epidemiology Program Office, AIDS Activity, Div of Host Factors, Center for Infectious Diseases, CDC.

Editorial Note: The etiology of AIDS remains unknown, but its reported occurrence among homosexual men, intravenous drug abusers, and persons with hemophilia A (*1*) suggests it may be caused by an infectious agent transmitted sexually or through exposure to blood or blood products. If the infant's illness described in this report is AIDS, its occurrence following receipt of blood products from a known AIDS case adds support to the infectious-agent hypothesis.

Several features of the infant's illness resemble those seen among adults with AIDS. Hypergammaglobulinemia with T-cell depletion and dysfunction are not typical of any of the well-characterized congenital immunodeficiency syndromes (*2*), but are similar to abnormalities described in AIDS (*3*). Disseminated *M. avium-intracellulare* infection, seen in this infant, is a reported manifestation of AIDS (*4*). Autoimmune thrombocytopenia, also seen in this infant, has been described among several homosexual men with immune dysfunction typical of AIDS (*5*). Nonetheless, since there is no definitive laboratory test for AIDS, any interpretation of this infant's illness must be made with caution.

If the platelet transfusion contained an etiologic agent for AIDS, one must assume that the agent can be present in the blood of a donor before onset of symptomatic illness and that the incubation period for such illness can be relatively long. This model for AIDS transmission is

Transfusion-Associated Acquired Immune Deficiency Syndrome — Continued

consistent with findings described in an investigation of a cluster of sexually related AIDS cases among homosexual men in southern California (*6*).

Of the 788 definite AIDS cases among adults reported thus far to CDC, 42 (5.3%) belong to no known risk group (i.e., they are not known to be homosexually active men, intravenous drug abusers, Haitians, or hemophiliacs). Two cases received blood products within 2 years of the onset of their illnesses and are currently under investigation.

This report and continuing reports of AIDS among persons with hemophilia A (*7*) raise serious questions about the possible transmission of AIDS through blood and blood products. The Assistant Secretary for Health is convening an advisory committee to address these questions.

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2. Stiehm ER, Fulginiti VA, eds. Immunologic disorders in infants and children. 2nd edition. Philadelphia: WB Saunders Company, 1980.
3. Gottlieb MS, Schroff R, Schanker HM, et al. *Pneumocystis carinii* pneumonia and mucosal candidiasis in previously healthy homosexual men: evidence of a new acquired cellular immunodeficiency. N Engl J Med 1981;305:1425-31.
4. Greene JB, Sidhu GS, Lewin S, et al. *Mycobacterium avium-intracellulare*: a cause of disseminated life-threatening infection in homosexuals and drug abusers. Ann Intern Med 1982;97:539-46.
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7. CDC. Update on acquired immune deficiency syndrome (AIDS) among patients with hemophilia A. MMWR 1982;31:644-6, 652.

Update: Influenza Virus A(H3N2) Isolations — United States

Three additional states, Pennsylvania, Tennessee, and Washington, as well as upstate New York, have reported influenza virus type A(H3N2) isolations. The isolates were collected from patients who had onset of influenza from mid to late November in Pittsburgh, Pennsylvania (1 case), Nashville, Tennessee (2 cases), and Skagit County, Washington (2 cases). The isolate from upstate New York was obtained from a 16-year-old female who had visited in Ottawa, Canada, for approximately 2 days, when she had onset of influenza on November 19. She returned to her home in Rochester, New York, on November 21, and a specimen was collected for virus testing on November 22.

Isolations of H3N2 influenza virus had earlier been reported from Alaska, New York City, Oregon, and Virginia (*1*). Alaska has widespread outbreaks of influenza, and 33 isolates of influenza virus, all H3N2, have now been identified. Isolates from other locations have been associated with sporadic cases of influenza rather than outbreaks.

Reported by D Ritter, J Middaugh, MD, State Epidemiologist, Alaska Dept of Health and Social Svcs; P Wright, MD, Vanderbilt University, R Hutcheson, MD, State Epidemiologist, Tennessee State Dept of Public Health; J Sarandria, Allegheny County Health Dept, M Richards, MD, C Hayes, MD, State Epidemiologist, Pennsylvania State Dept of Health; S Mills, J Allard, PhD, State Epidemiologist, Washington State Dept of Social and Health Svcs; R Dolin, MD, R Betts, MD, C Hall, MD, Univ of Rochester, D

Influenza – Continued

Morse, MD, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; Influenza Br, Center for Infectious Diseases, CDC.

Reference

1. CDC. Influenza A(H3N2) virus isolations—United States. MMWR 1982;31:638.

International Notes

Outbreak of *Salmonella oranienburg* Infection — Norway

From November 1981 to September 1982, 126 bacteriologically confirmed cases of *Salmonella oranienburg* infection were reported through the national reporting system of infectious diseases. Nearly all the infections were contracted in Norway.

S. oranienburg infections are usually rare in Norway; the average number recorded from 1975 to 1980 was less than four per year. Practically all these cases were contracted abroad by children less than 1 year of age coming from east Asian countries. The current outbreak has spread throughout most parts of Norway, clustering in the southeastern, central, and southwestern sections. Only six of 18 counties reported no cases. Only a few cases were reported from the two largest cities, Oslo and Bergen.

The number of cases recorded per week and per month was fairly constant throughout the period. The age distribution shows that approximately 85% of patients were more than 25 years of age (Table 3). Approximately 1/4-1/2 of the patients reported have been hospitalized, some with septicemia.

Since June-July this year, health authorities, in cooperation with the Food Control Laboratories, have strengthened their efforts to trace the sources of the outbreak. On August 27, the Food Control Laboratory in Trøndelag succeeded in isolating *S. oranienburg* from a home-made cured meat product in a household where a female had *S. oranienburg* infection. When the different ingredients used in preparing this meat product were examined, *S. oranienburg* was isolated from a pepper box. This pepper had been bought in a nearby store belonging to a nation-wide food distribution firm. Eventually, the same laboratory succeeded in isolating *S. oranienburg* from six unopened pepper boxes and pepper bags obtained from different households with *S. oranienburg* cases and from different stores belonging to the food chain. The contaminated black pepper seems to be restricted to two different consignments imported from Brazil via the Federal Republic of Germany in April and August 1981.

TABLE 3. Age-distribution of *Salmonella oranienburg*-infected patients — Norway, January-September 1982

Age (yrs)	Number of cases	Population	Incidence/100,000
<1	4	263,512	1.5
1-4	3		
5-14	4	648,975	0.6
15-24	9	621,323	1.5
25-54	46	1,479,398	3.1
55-64	27	467,644	5.8
≥65	28	598,048	4.7
Total	121	4,078,900	3.0

Salmonella oranienburg – Continued

Other brands of pepper from other importers have been extensively examined but have failed to reveal any positive *Salmonella* isolates. Further studies are in progress to clarify how the pepper contamination could have occurred.

Reported by WHO Weekly Epidemiological Record *1982;57:329-30.*

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Epidemiologic Notes and Reports

Outbreak of Measles Following an Imported Case — Florida

As of December 13, 1982, 203 confirmed cases of measles, with rash onsets from September 10 through December 3, were reported from Dade County, Florida. Three additional cases in Florida were linked to the outbreak.

The source of the outbreak was an imported case* in a 14-year-old male resident of Dade County, who lacked documentation of immunity to measles.† He had vacationed in Peru from July 31 to August 31. From August 24 to 26, he had face-to-face contact with a cousin in Peru who had fever and a generalized maculopapular rash. After returning to the United States, he attended Junior High School A from September 1 until rash onset on September 10. He transmitted measles to seven students at Junior High School A, all of whom lacked documentation of measles immunity. They had rash onsets from September 20 through September 27. This led to a county-wide outbreak concentrated primarily in school children (Figure 1).

The highest attack rate, 3.9%, occurred in Junior High School A, which accounted for 73 (36.0%) of the 203 cases. The outbreak was concentrated in Junior High School A from September 10 through October 12 (Figure 1). However, by October 28, measles cases were reported in 11 additional schools, geographically widespread across the county. Ultimately, measles cases occurred in 32 of 186 schools in south Dade County and in 25 of 270 schools in north Dade County. In addition, four day care centers, one community college, and one military school were affected.

As part of the response to the outbreak, local authorities ordered a review of immunization records of all students in public and private schools in Dade County; 286,000 immunization records were reviewed to identify all students who had inadequate evidence of immunity to measles. Initially, susceptible students were excluded from those schools in which there were measles cases. On October 28, a county-wide measles emergency was declared by the County Health Director permitting non-compliant students, including those with medical or religious exemptions to vaccination, to be excluded from school attendance beginning on November 8 in south Dade County, and on November 22 in north Dade County. Specially assigned State Immunization Program staff joined county health personnel to review records and to administer vaccines. No measles cases were reported among non-compliant students more than 9 days after the school exclusion day.

After control measures were implemented, changes occurred in the age distribution and

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*Imported measles: measles illness in a person (U.S. citizen or foreign national) who has onset of rash within 18 days of arrival from a foreign country, and for which no indigenous source can be identified.

†Immunity to measles: defined by the State of Florida as a dated record showing administration of measles vaccine on or after the first birthday and on or after January 1, 1968, or written certification of previous physician-diagnosed measles illness.

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HE 20.7009:

Measles – Continued

measles immunity status of reported cases. From September 10 through October 15 (the date the immunization clinic was held in Junior High School A), 54 (85.7%) of 63 measles cases occurred among students aged 10-14 years, whereas 18 (20.5%) of 88 cases occurred in that age group with rash onsets from October 28 through December 3 (Table 1). In Junior High School A, all nine cases with rash onset from September 10 through October 3 were classified as preventable.[§] However, no preventable cases were reported in Junior High School A one incubation period after the control clinic.

Overall, 55 (27.1%) of 203 cases are classified as preventable; 42 persons (20.7%) lacked documentation of immunity to measles (24 of whom were vaccinated before the first birthday), and 13 (6.4%) had been vaccinated less than 2 weeks before rash onset. Of the 148 (72.9%) cases classified as not preventable, 110 persons (54.2%) had physician-signed records of immunity to measles,[†] 18 (8.9%) were less than 16 months old, 12 (5.9%) were born before 1957, and 8 (3.9%) had religious exemptions to vaccination.

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Editorial Note: This outbreak resulted from an imported measles case in a U.S. citizen who transmitted infection to seven other students in a junior high school. All eight cases were preventable; none of the eight had documentation of immunity to measles, although five had received vaccine before 12 months of age. An earlier imported case had occurred while

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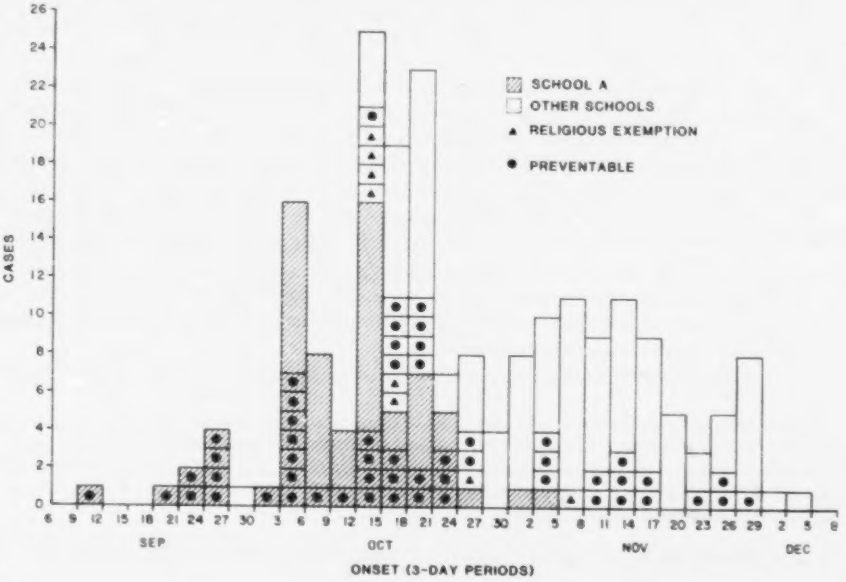
[§] Preventable case: defined by the State of Florida as measles illness in a person more than 15 months old and born after 1956 who lacks documentation of immunity to measles, and has no contraindication or religious exemption to receiving vaccine.

FIGURE 1. Measles cases by date of rash onset – Dade County, Florida, 1982



Measles – Continued

school was in summer recess, but that case caused only one import-associated case. This outbreak might not have occurred if the first eight persons with measles had been appropriately vaccinated. Before these importations, Dade County, like most of the United States, was probably free of measles. Imported cases are an important source of measles throughout the country (*1*). Over 25% of reported cases during the first 26 weeks of 1982 were imported or import-associated (*2*). While such cases are generally not preventable, transmission to others is usually limited when immunization levels are high (*1-3*).

In Dade County schools, identification of susceptible students was difficult, because many health records merely certified vaccination without specifying dates of vaccination. Dated records allow reviewers to identify students who had been vaccinated before their first birthdays and need revaccination. Florida law now requires use of a dated form.

The high proportion of cases with documentation of adequate vaccination does not imply a low vaccine efficacy. If an outbreak occurs in a highly vaccinated population, a substantial proportion of cases would be expected among vaccinees (*4*). For example, if an outbreak were to occur in a population of which 90% was vaccinated with a 90%-effective vaccine, approximately half the cases would be expected among prior vaccine recipients. When highly effective vaccines, such as the current measles vaccine, have been given to very large proportions of a population, disease occurrence is infrequent and usually short lived. Measles vaccine efficacy has usually been greater than 90% when determined in settings similar to Dade County (*5*).

Successful control of this outbreak was facilitated by the collaboration of teachers, nurses, physicians, the news media, education and health officials, and parents and children. The mandatory policy to exclude non-compliant students from school attendance led to the vaccination of over 35,000 school children. The declining number of new measles cases among school children and the declining proportion of preventable cases suggested the policy's success.

Experience during other outbreaks has demonstrated that transmission was usually interrupted shortly after a decline in school-age preventable cases (*6,7*). The available data indicate that mandatory exclusion of non-compliant students, under the recently amended Florida statutes (*8*), was an effective strategy to interrupt measles transmission.

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TABLE 1. Measles cases by 2-week intervals, by age groups — Dade County, Florida, 1982

Age (yrs)	Aug 31-Sept 12	Sept 13-Sept 26	Sept 27-Oct 10	Oct 11-Oct 24	Oct 25-Nov 7	Nov 8-Nov 21	Nov 22-Dec 5	Total
0-4	—*	—	—	13	6	9	5	33
5-9	—	—	—	12	12	14	1	39
10-14	1	5	24	46	12	6	5	99
15-19	—	—	2	2	4	5	2	15
20+	—	—	—	5	4	4	4	17
Total	1	5	26	78	38	38	17	203

*No reported cases

Update, Influenza Activity — United States and Canada

United States: New York: On November 16, 1982, the New York State Health Department was informed that an outbreak of febrile respiratory illness was developing among the 390 residents enrolled at a job corp training center located in Sullivan County, New York. On November 18, an epidemiologist from the New York State Health Department visited the center and interviewed the residents who reported having a febrile respiratory illness in November. Only one resident was ill before November 13, but 24 more cases were reported through November 18. The residents and several staff members described having an acute illness with myalgia and cough, usually accompanied by fever (≥ 38.9 C [102 F]) and sore throat. Specimens were collected from six residents who were ill at the time of the investigation, and influenza type A(H3N2) virus was later isolated from two of the six specimens.

Ten residents had onset of influenza on November 18 when the outbreak abruptly terminated as the residents were dispersed to their homes for a Thanksgiving holiday vacation. When they returned after vacation, no unusual prevalence of respiratory illness was observed. This episode represents the first documented outbreak of influenza in the 48 continental states this season.

Texas: The first reported influenza virus isolates have been identified from specimens collected on November 22 and 23 from children in Houston with sporadic influenza illness. This

(Continued on page 665)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease		49th Week Ending			Cumulative, First 49 Weeks		
		December 11, 1982	December 12, 1981	Median 1977-1981	December 11, 1982	December 12, 1981	Median 1977-1981
Aseptic meningitis		204	145	145	8,709	9,076	7,420
Brucellosis		1	3	4	147	166	171
Encephalitis	Primary (arthropod-borne & unspec.)	28	22	23	1,376	1,415	1,138
	Post-infectious	1	1	2	59	87	205
Gonorrhea	Civilian	18,174	19,481	20,219	899,249	942,590	945,162
	Military	556	828	672	24,568	26,425	25,325
Hepatitis	Type A	579	628	631	21,523	23,931	27,571
	Type B	497	479	393	20,365	19,529	15,459
	Non A, Non B	80	N	N	2,242	N	N
	Unspecified	182	209	228	8,319	10,197	9,883
Legionellosis		5	N	N	526	N	N
Leprosy		11	2	5	197	235	166
Malaria		16	18	18	981	1,297	761
Measles (rubeola)		44	14	148	1,627	2,905	13,312
Meningococcal infections	Total	51	50	51	2,750	3,279	2,436
	Civilian	51	50	51	2,737	3,266	2,416
	Military	-	-	-	13	13	19
Mumps		134	145	289	4,989	4,411	13,122
Pertussis		36	26	41	1,644	1,161	1,584
Rubella (German measles)		31	42	115	2,217	2,008	11,447
Syphilis (Primary & Secondary)	Civilian	606	676	524	30,886	29,271	23,556
	Military	12	4	6	417	355	300
Tuberculosis		554	521	555	24,242	25,622	25,901
Tularemia		5	4	3	238	264	179
Typhoid fever		9	19	7	377	549	497
Typhus fever, tick-borne (RMSF)		6	3	3	972	1,163	1,111
Rabies, animal		97	93	73	5,840	6,823	4,745

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	7
Botulism	76	Paralytic	7
Cholera	-	Psittacosis (Ark. 1, Wash. 1)	115
Congenital rubella syndrome	6	Rabies, human	-
Diphtheria	3	Tetanus	74
Leptospirosis (La. 1, Tex. 1)	69	Trichinosis (N.C. 1)	83
Plague	18	Typhus fever, flea-borne (endemic, murine) (Tenn. 1, Hawaii 1)	42

TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 11, 1982 and December 12, 1981 (49th week)

Reporting Area	Aseptic Menin-gitis	Brucel-losis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	1982	Cum 1982	Cum 1982	Cum 1982	Cum 1982	Cum 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	204	147	1.376	59	899.249	942,590	579	497	80	182	5	197
NEW ENGLAND	4	3	55	6	21,823	22,803	11	26	2	14	-	2
Maine	2	-	-	-	1,145	1,253	-	1	-	-	-	-
N.H.	-	-	8	-	701	851	-	-	-	1	-	-
Vt.	-	-	-	-	399	414	1	-	-	-	-	-
Mass.	2	-	25	-	9,727	9,662	4	8	1	12	-	-
R.I.	-	-	-	1	1,473	1,411	2	4	-	-	-	-
Conn.	-	3	22	5	8,378	9,212	4	13	1	1	-	2
MID. ATLANTIC	34	3	140	14	114,761	114,112	49	101	8	12	-	9
Upstate N.Y.	20	3	59	3	18,981	19,959	13	13	5	2	-	1
N.Y. City	8	-	19	-	47,180	46,423	10	33	-	2	-	6
N.J.	4	-	23	-	20,903	21,590	9	29	3	3	-	1
Pa.	2	-	39	11	27,697	26,140	17	26	-	5	-	1
E.N. CENTRAL	23	4	347	12	125,919	139,975	66	64	2	10	2	10
Ohio	10	1	134	5	33,615	43,423	41	26	-	3	-	-
Ind.	2	-	94	3	15,525	11,547	5	14	1	5	-	-
Ill.	-	2	18	2	34,163	41,036	1	1	1	-	-	8
Mich.	11	1	72	-	31,234	31,062	19	23	-	2	2	-
Wis.	-	-	29	2	11,382	12,907	-	-	-	-	-	2
W.N. CENTRAL	52	17	98	4	42,370	45,318	38	16	4	1	1	7
Minn.	-	1	27	1	6,158	7,191	4	2	1	-	-	4
Iowa	1	5	52	1	4,539	5,010	-	2	-	-	1	-
Mo.	49	4	8	-	20,033	20,959	4	10	1	1	-	1
N. Dak.	-	1	-	-	546	571	-	-	-	-	-	-
S. Dak.	1	1	-	1	1,082	1,224	-	-	-	-	-	1
Nebr.	1	2	6	-	2,531	3,362	2	-	-	-	-	1
Kans.	-	3	5	1	7,481	7,001	28	2	2	-	-	-
S. ATLANTIC	17	28	196	9	235,167	231,841	56	71	16	14	1	11
Del.	-	-	-	-	3,929	3,768	1	2	-	-	-	-
Md.	2	-	25	-	29,195	27,713	1	12	4	1	1	4
D.C.	-	-	-	-	14,437	13,202	-	2	-	-	-	-
Va.	4	10	42	1	18,960	21,119	4	6	2	2	-	1
W. Va.	-	-	16	-	2,634	3,411	1	1	-	-	-	-
N.C.	5	-	30	1	37,112	35,667	1	6	-	1	-	-
S.C.	-	2	2	-	22,843	22,493	2	1	-	-	-	-
Ga.	-	3	14	-	46,599	48,138	18	14	2	2	-	1
Fla.	6	13	67	7	59,458	56,330	28	27	8	8	-	5
E.S. CENTRAL	8	12	66	5	78,878	78,804	17	19	2	4	-	-
Ky.	1	-	1	-	10,557	9,856	7	3	-	-	-	-
Tenn.	2	7	30	-	30,655	29,939	4	8	1	3	-	-
Ala.	4	4	17	5	23,742	23,661	3	5	1	1	-	-
Miss.	1	1	18	-	13,924	15,348	3	3	-	-	-	-
W.S. CENTRAL	8	45	220	1	125,079	124,337	134	53	3	66	-	27
Ark.	-	7	21	-	10,067	9,470	-	1	-	5	-	-
La.	1	8	28	-	23,302	22,052	35	15	2	3	-	-
Okla.	2	8	39	-	13,723	13,663	22	14	1	7	-	-
Tex.	5	22	132	1	77,987	79,152	77	23	-	51	-	27
MOUNTAIN	14	3	55	2	30,285	37,252	57	38	4	14	1	2
Mont.	-	2	-	-	1,283	1,355	1	2	-	1	1	-
Idaho	-	1	-	-	1,448	1,670	-	-	-	-	-	1
Wyo.	-	-	1	-	922	978	1	-	-	-	-	-
Colo.	4	-	19	1	8,163	10,013	7	6	1	1	-	-
N. Mex.	-	-	1	-	4,183	4,237	5	-	-	-	-	-
Ariz.	9	-	11	-	7,765	10,957	18	8	1	6	-	-
Utah	1	-	18	1	1,496	1,844	18	6	1	4	-	1
Nev.	-	-	5	-	5,025	6,198	7	16	1	2	-	-
PACIFIC	44	32	199	6	124,967	148,148	151	109	39	47	-	129
Wash.	8	1	13	-	10,844	12,411	10	7	7	1	-	14
Oreg.	1	-	4	-	7,453	8,831	11	4	2	-	-	2
Calif.	34	30	166	6	100,962	120,202	130	98	30	46	-	76
Alaska	-	1	10	-	3,254	3,846	-	-	-	-	-	1
Hawaii	1	-	6	-	2,454	2,858	-	-	-	-	-	36
Guam	U	-	-	1	107	111	U	U	U	U	U	1
P.R.	-	-	1	3	2,548	3,115	2	1	-	4	-	3
V.I.	-	-	-	-	233	250	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	388	429	U	U	U	U	U	44

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 11, 1982 and December 12, 1981 (49th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum 1982	1982	Cum 1982	Cum 1981	1982	Cum 1982	1982	Cum 1982	1982	1982	Cum 1982	Cum 1981
UNITED STATES	16	981	44	1,627	2,905	51	2,750	134	4,989	36	31	2,217	2,008
NEW ENGLAND	-	50	-	16	86	6	153	3	193	3	-	19	122
Maine	-	-	-	-	5	1	11	-	43	-	-	-	33
N.H.	-	2	-	3	9	2	20	-	18	1	-	11	53
Vt	-	-	-	2	3	-	11	-	7	-	-	-	-
Mass	-	28	-	5	59	3	44	1	83	2	-	2	23
R.I.	-	3	-	-	-	-	16	1	18	-	-	1	-
Conn	-	17	-	6	10	-	51	1	24	-	-	5	13
MID ATLANTIC	6	171	2	169	959	12	496	5	333	20	2	109	229
Upstate N.Y.	2	33	-	113	222	2	170	3	94	16	1	53	114
N.Y. City	-	66	1	44	106	2	95	-	47	-	1	36	55
N.J.	4	35	-	6	59	3	104	-	52	-	-	18	47
Pa	-	37	1	6	572	5	127	2	140	4	-	2	13
E.N. CENTRAL	-	85	-	77	90	11	362	43	2,485	4	-	196	425
Ohio	-	13	-	1	20	1	124	31	1,730	2	-	4	3
Ind	-	4	-	2	9	3	39	1	45	-	-	29	137
Ill	-	36	-	24	25	5	96	4	206	1	-	73	118
Mich	-	26	-	50	33	2	80	6	382	1	-	49	41
Wis	-	6	-	-	3	-	23	1	122	-	-	41	126
W.N. CENTRAL	1	32	-	49	10	2	140	6	631	2	-	62	80
Minn	1	5	-	-	3	-	32	-	456	-	-	7	8
Iowa	-	8	-	-	1	-	12	-	53	-	-	-	4
Mo	-	10	-	2	1	1	42	1	21	2	-	38	2
N. Dak	-	2	-	-	-	-	6	-	-	-	-	-	-
S. Dak	-	-	-	-	-	1	9	-	1	-	-	1	-
Nebr	-	4	-	3	4	-	14	-	1	-	-	-	1
Kans	-	3	-	44	1	-	25	5	99	-	-	16	65
S. ATLANTIC	-	127	42	210	489	5	570	22	314	5	2	96	146
Del	-	4	-	-	-	-	1	-	12	-	-	1	1
Md	-	20	-	4	5	1	42	1	33	-	-	34	1
D.C.	-	4	-	1	1	-	5	-	-	-	-	-	-
Va	-	39	-	14	14	-	68	2	41	1	-	12	8
W. Va	-	7	-	3	9	-	10	16	116	-	-	3	22
N.C.	-	8	1	2	3	-	110	1	21	-	-	2	5
S.C.	-	4	-	-	2	1	70	-	17	-	-	1	8
Ga	-	16	-	-	111	2	111	2	26	1	1	18	39
Fla	-	25	41	186	344	1	153	-	48	3	1	25	62
E.S. CENTRAL	-	10	-	9	6	4	166	2	66	-	-	47	40
Ky	-	5	-	1	2	-	25	1	21	-	-	29	26
Tenn	-	-	-	6	2	3	74	-	25	-	-	2	13
Ala	-	2	-	2	2	1	54	-	10	-	-	-	1
Miss	-	3	-	-	-	-	13	1	10	-	-	16	-
W.S. CENTRAL	2	67	-	173	875	3	316	27	256	1	1	121	191
Ark	-	5	-	-	23	-	16	1	8	-	-	1	7
La	-	5	-	14	4	-	63	-	6	1	-	1	9
Okla	-	8	-	30	6	1	32	-	-	-	-	3	3
Tex	2	49	-	129	842	2	205	26	242	-	1	116	172
MOUNTAIN	1	31	-	28	38	-	116	1	113	-	2	85	97
Mont	-	1	-	-	-	-	7	-	6	-	-	6	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	7	4
Wyo	-	-	-	1	1	-	5	-	2	-	-	7	12
Colo	-	12	-	7	11	-	48	1	19	-	-	6	30
N. Mex	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz	1	9	-	17	7	-	21	-	54	-	2	18	22
Utah	-	4	-	3	-	-	11	-	20	-	-	23	10
Nev	-	-	-	-	10	-	2	-	8	-	-	12	11
PACIFIC	6	408	-	896	352	8	431	25	598	1	24	1,482	678
Wash	-	24	-	42	3	1	50	20	99	-	16	57	106
Oreg	-	15	-	24	5	3	79	-	-	-	1	7	53
Calif	6	361	-	824	337	4	287	5	466	1	7	1,404	503
Alaska	-	1	-	1	-	-	11	-	12	-	-	5	1
Hawaii	-	7	-	5	7	-	4	-	21	-	-	9	15
Guam	U	1	U	6	6	U	2	U	5	U	U	2	3
P.R.	-	4	1	137	305	-	9	1	99	-	1	13	5
V.I.	-	-	-	-	24	2	2	-	3	-	-	2	1
Pac. Trust Terr	U	-	U	1	1	U	5	U	6	U	U	-	2

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 11, 1982 and December 12, 1981 (49th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	30,886	29,271	554	24,242	238	9	377	6	972	5,840
NEW ENGLAND	579	582	15	702	7	-	18	-	11	42
Maine	7	5	-	53	-	-	-	-	-	26
N.H.	5	16	-	30	-	-	-	-	1	1
Vt.	4	17	-	10	-	-	2	-	-	2
Mass.	389	356	11	448	7	-	14	-	6	7
R.I.	24	35	-	31	-	-	-	-	2	-
Conn.	150	133	4	130	-	-	2	-	2	6
MID. ATLANTIC	4,124	4,183	103	4,087	7	1	67	-	45	200
Upstate N.Y.	406	425	30	709	7	-	11	-	16	110
N.Y. City	2,462	2,469	24	1,552	-	1	36	-	3	-
N.J.	586	586	27	803	-	-	12	-	14	17
Pa.	660	703	22	1,023	-	-	8	-	12	73
E.N. CENTRAL	1,741	2,212	61	3,845	1	2	37	1	87	583
Ohio	296	302	3	580	-	1	13	-	77	79
Ind.	193	280	6	439	-	-	2	-	2	73
Ill.	880	1,185	23	1,592	-	1	8	1	8	295
Mich.	276	356	25	827	-	-	11	-	-	7
Wis.	96	89	4	207	1	-	3	-	-	129
W.N. CENTRAL	518	641	20	725	39	-	16	-	34	1,164
Minn.	136	184	6	139	-	-	8	-	-	206
Iowa	32	29	2	73	3	-	1	-	4	376
Mo.	275	370	8	344	26	-	4	-	13	118
N. Dak.	7	12	-	15	-	-	-	-	-	95
S. Dak.	2	2	3	33	1	-	-	-	4	101
Nebr.	14	10	-	29	4	-	2	-	2	122
Kans.	52	34	1	92	5	-	1	-	11	144
S. ATLANTIC	8,506	7,762	137	5,065	13	-	45	4	519	1,240
Del.	25	15	-	45	-	-	-	-	-	2
Md.	472	552	11	586	1	-	10	1	50	86
D.C.	461	630	3	240	-	-	-	-	-	-
Va.	585	665	9	579	5	-	4	-	73	697
W. Va.	30	30	6	148	-	-	4	-	8	50
N.C.	694	614	19	743	-	-	3	2	224	85
S.C.	537	539	19	498	6	-	3	-	106	65
Ga.	1,759	1,871	43	827	-	-	-	-	51	207
Fla.	3,943	2,846	27	1,389	1	-	21	1	7	68
E.S. CENTRAL	2,127	1,918	54	2,196	8	-	20	1	97	627
Ky.	127	103	9	575	-	-	4	-	1	127
Tenn.	607	864	13	708	6	-	4	-	59	350
Ala.	794	584	15	600	-	-	9	-	17	143
Miss.	599	567	17	313	2	-	3	1	20	7
W.S. CENTRAL	8,148	7,030	44	2,932	121	2	41	-	159	1,130
Ark.	213	157	4	342	73	-	8	-	22	152
La.	1,772	1,595	-	447	3	-	3	-	2	31
Okla.	179	166	-	316	34	-	3	-	76	188
Tex.	5,984	5,112	40	1,827	11	2	27	-	59	759
MOUNTAIN	779	726	12	668	32	-	14	-	14	274
Mont.	5	11	-	39	4	-	-	-	5	91
Idaho	25	18	-	29	1	-	-	-	4	11
Wyo.	16	17	-	6	5	-	-	-	1	21
Colo.	223	231	2	92	7	-	3	-	1	48
N. Mex.	181	125	3	113	4	-	-	-	1	23
Ariz.	207	173	5	281	-	-	8	-	-	58
Utah	22	29	-	43	11	-	2	-	-	18
Nev.	100	122	2	65	-	-	1	-	2	4
PACIFIC	4,384	4,237	108	4,232	10	4	119	-	6	580
Wash.	160	184	9	271	1	2	9	-	-	8
Oreg.	109	113	7	186	2	-	4	-	1	5
Calif.	3,974	3,854	89	3,447	6	2	102	-	5	484
Alaska	15	13	-	80	1	-	1	-	-	83
Hawaii	106	73	3	248	-	-	3	-	-	-
Guam	1	-	U	38	-	U	-	U	-	-
P.R.	784	606	-	431	-	-	3	-	-	48
V.I.	24	16	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	114	-	U	1	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending December 11, 1982 (49th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	< 1	
NEW ENGLAND	661	441	156	31	20	13	56
Boston, Mass.	188	112	51	13	6	6	24
Bridgeport, Conn.	38	25	10	2	-	1	6
Cambridge, Mass.	30	23	6	-	1	-	5
Fall River, Mass.	26	19	5	1	1	-	-
Hartford, Conn.	40	26	11	1	2	-	5
Lowell, Mass.	35	19	11	1	3	1	1
Lynn, Mass.	19	12	5	2	-	-	-
New Bedford, Mass.	18	15	3	-	-	-	1
New Haven, Conn.	68	42	17	5	1	3	2
Providence, R.I. §	56	52	-	2	-	2	5
Somerville, Mass.	11	8	3	-	-	-	-
Springfield, Mass.	38	28	5	-	3	-	4
Waterbury, Conn.	43	28	12	2	1	-	1
Worcester, Mass.	53	32	17	2	2	-	2
MID. ATLANTIC	2,530	1,691	554	150	66	69	95
Albany, N.Y.	53	38	10	1	1	3	2
Allentown, Pa.	17	13	4	-	-	-	1
Buffalo, N.Y.	100	74	21	1	1	3	5
Camden, N.J.	34	15	11	2	5	1	-
Elizabeth, N.J.	31	25	5	1	-	-	2
Erie, Pa.†	43	22	17	4	-	-	2
Jersey City, N.J.	45	29	10	1	-	5	-
N.Y. City, N.Y.	1,415	947	296	108	36	28	48
Newark, N.J.	69	32	21	7	4	5	5
Paterson, N.J.	24	13	2	3	2	4	2
Philadelphia, Pa.†	263	163	69	13	9	9	13
Pittsburgh, Pa.†	60	40	13	3	-	4	-
Reading, Pa.	32	22	9	-	-	1	1
Rochester, N.Y.	94	65	17	3	3	6	6
Schenectady, N.Y.	29	22	6	-	1	-	1
Scranton, Pa.†	22	19	3	-	-	-	-
Syracuse, N.Y.	108	83	20	1	4	-	-
Trenton, N.J.	39	26	11	2	-	-	4
Utica, N.Y.	26	24	2	-	-	-	-
Yonkers, N.Y.	26	19	7	-	-	-	3
E.N. CENTRAL	2,285	1,406	572	154	67	86	68
Akron, Ohio	65	37	20	3	2	3	-
Canton, Ohio	42	29	9	2	1	1	1
Chicago, Ill.	500	283	130	44	17	26	8
Cincinnati, Ohio	171	119	40	8	2	2	18
Cleveland, Ohio	153	77	50	10	5	11	3
Columbus, Ohio	140	80	43	8	3	6	-
Dayton, Ohio	109	74	24	3	5	3	1
Detroit, Mich.	266	146	62	36	10	12	7
Evansville, Ind.	40	24	12	2	-	2	2
Fort Wayne, Ind.	42	25	15	1	-	1	4
Gary, Ind.	21	11	6	2	2	-	1
Grand Rapids, Mich.	55	37	14	2	1	1	1
Indianapolis, Ind.	187	112	44	13	7	11	1
Madison, Wis.	43	27	12	2	2	-	6
Milwaukee, Wis.	132	100	24	6	1	1	3
Peoria, Ill.	49	29	14	1	2	3	4
Rockford, Ill.	33	26	4	3	-	-	2
South Bend, Ind.	42	31	8	2	1	-	3
Toledo, Ohio	142	104	28	4	3	3	3
Youngstown, Ohio	53	35	13	2	3	-	-
W.N. CENTRAL	739	499	151	43	21	25	33
Des Moines, Iowa	57	34	17	3	3	-	2
Duluth, Minn.	40	30	4	5	1	-	-
Kansas City, Kans.	29	22	5	-	-	2	-
Kansas City, Mo.	101	63	25	6	3	4	3
Lincoln, Nebr.	34	28	2	3	-	1	1
Minneapolis, Minn.	88	68	9	4	3	4	4
Omaha, Nebr.	94	53	28	5	4	4	5
St. Louis, Mo.	165	108	31	15	4	7	10
St. Paul, Minn.	72	51	18	1	1	1	3
Wichita, Kans.	59	42	12	1	2	2	5

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	< 1	
S. ATLANTIC	1,179	693	328	78	35	45	43
Atlanta, Ga.	130	74	40	8	4	4	4
Baltimore, Md.	196	110	53	19	7	7	4
Charlotte, N.C.	80	41	28	4	3	4	3
Jacksonville, Fla.	92	51	30	6	4	1	7
Miami, Fla.	90	41	34	8	4	3	-
Norfolk, Va.	57	37	13	2	-	5	2
Richmond, Va.	81	47	28	4	-	2	4
Savannah, Ga.	51	27	10	5	5	4	3
St. Petersburg, Fla.	93	69	20	2	1	1	6
Tampa, Fla.	75	52	13	4	2	4	2
Washington, D.C.	189	115	47	15	4	8	6
Wilmington, Del.	45	29	12	1	1	2	2
E.S. CENTRAL	903	568	232	44	33	25	53
Birmingham, Ala.	135	92	28	10	4	1	5
Chattanooga, Tenn.	75	54	14	3	1	3	5
Knoxville, Tenn.	63	48	11	1	2	1	2
Louisville, Ky.	111	56	34	10	5	6	11
Memphis, Tenn.	228	138	65	8	5	11	12
Mobile, Ala.	141	98	32	2	9	2	9
Montgomery, Ala.	41	27	11	2	1	-	3
Nashville, Tenn.	109	57	37	8	6	1	6
W.S. CENTRAL	1,298	751	310	111	57	69	61
Austin, Tex.	47	32	8	3	3	1	3
Baton Rouge, La.	43	28	13	-	1	1	1
Corpus Christi, Tex.	56	42	8	5	-	1	2
Dallas, Tex.	179	100	44	16	14	5	4
El Paso, Tex.	82	46	16	7	5	8	14
Fort Worth, Tex.	104	56	24	16	1	7	8
Houston, Tex.	243	109	77	33	12	12	5
Little Rock, Ark.	84	52	24	3	1	4	4
New Orleans, La.	122	63	32	7	9	11	-
San Antonio, Tex.	182	124	33	11	7	7	13
Shreveport, La.	55	36	7	7	3	2	-
Tulsa, Okla.	101	63	24	3	1	10	7
MOUNTAIN	678	434	143	40	27	34	27
Albuquerque, N. Mex.	76	50	10	6	5	5	1
Colo. Springs, Colo.	36	29	3	4	-	-	1
Denver, Colo.	124	85	29	3	5	2	5
Las Vegas, Nev.	82	51	18	4	5	4	5
Ogden, Utah	19	11	3	1	-	4	1
Phoenix, Ariz.	169	101	43	10	7	8	1
Pueblo, Colo.	14	11	2	-	1	-	1
Salt Lake City, Utah	62	28	20	4	3	7	1
Tucson, Ariz.	96	68	15	8	1	4	11
PACIFIC	1,795	1,210	406	77	43	57	102
Berkeley, Calif.	20	14	4	-	1	-	-
Fresno, Calif.	88	65	14	2	4	3	7
Glendale, Calif.	38	28	7	1	-	-	1
Honolulu, Hawaii	56	35	17	2	1	1	6
Long Beach, Calif.	105	60	37	1	1	6	5
Los Angeles, Calif.	455	298	110	25	12	9	15
Oakland, Calif.	59	43	9	4	2	1	3
Pasadena, Calif.	30	19	7	1	-	3	2
Portland, Oreg.	156	122	25	4	2	3	12
Sacramento, Calif.	77	49	15	4	3	6	3
San Diego, Calif.	135	84	36	7	4	4	11
San Francisco, Calif.	167	111	36	11	6	3	10
San Jose, Calif.	154	103	32	7	2	10	16
Seattle, Wash.	153	105	35	4	3	6	2
Spokane, Wash.	59	40	12	3	2	2	5
Tacoma, Wash.	45	34	10	1	-	-	4
TOTAL	12,068††	7,693	2,852	728	359	423	538

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*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

Influenza – Continued

report brings the number of states reporting influenza virus isolates of type A(H3N2) virus, to 8: Alaska, New York, Oregon, Pennsylvania, Tennessee, Texas, Virginia, and Washington.

Canada: Several isolates of influenza type A(H3N2) virus have been reported by Canadian health officials from specimens collected from persons ranging in age from 10 to 64. Six of the isolates were from British Columbia, three from Alberta, and two from Saskatchewan. Influenza activity was described at low levels throughout British Columbia and as sporadic in two locations in Alberta and around the area of Regina, Saskatchewan.

Reported by R Deibel, MD, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; P Glezen, MD, Baylor College of Medicine, Houston, C Webb, Jr, MD, State Epidemiologist, Texas State Dept of Health; Bureau of Epidemiology, Laboratory Centre for Disease Control, Ottawa, Ontario; WHO Collaborating Center for Influenza, Influenza Br, Center for Infectious Diseases, CDC.

Unexplained Immunodeficiency and Opportunistic Infections in Infants — New York, New Jersey, California

CDC has received reports of four infants (under 2 years of age) with unexplained cellular immunodeficiency and opportunistic infections.

Case 1: The infant, a black/hispanic male weighing 5 lb 14 oz, was born in December 1980 following a 36-38-week pregnancy. Pregnancy had been complicated by bleeding in the fourth month and by preeclampsia in the ninth month. The infant was well until 3 months of age, when oral candidiasis was noted. At 4 months, hepatosplenomegaly was observed, and at 7 months, he had staphylococcal impetigo. Growth, which had been slow, stopped at 9 months. Head circumference, which had been below the third percentile, also stopped increasing. At 9 months, serum levels of IgG and IgA were normal; IgM was high-normal. T-cell studies were normal, except for impaired in-vitro responses to *Candida* antigen and alloantigen.

At 17 months of age, the infant had progressive pulmonary infiltrates, as well as continuing oral candidiasis, and was hospitalized. *Mycobacterium avium-intracellulare* was cultured from sputum and bone marrow samples. A CAT scan of the head revealed bilateral calcifications of the basal ganglia and subcortical regions of the frontal lobes. Repeat immunologic studies done at age 20 months showed lymphopenia, decreased numbers of T-lymphocytes, and severely impaired T-cell function in vitro; immunoglobulin determinations are pending. The infant remains alive and is receiving therapy for his mycobacterial infection.

The infant's mother, a 29-year-old resident of New York City, gave a history of intravenous drug abuse. Although she was in apparently good health at the time of the infant's birth, she developed fever, dyspnea, and oral candidiasis in October 1981. One month later, she was hospitalized and died of biopsy-proven *Pneumocystis carinii* pneumonia (PCP). She had been lymphopenic during the hospitalization; further immunologic studies were not done. At autopsy, no underlying cause for immune deficiency was found.

Case 2: The infant, a Haitian male weighing 6 lb 11 oz, was born in January 1981 following full-term pregnancy. The immediate postpartum period was complicated by respiratory distress. Diarrhea developed at 2 weeks of age and persisted. His physical development was retarded. At 5 months, he was hospitalized because of fever and diarrhea. On examination, he had hepatosplenomegaly, lymphadenopathy, and otitis media. While on antibiotics, he developed pulmonary infiltrates. An open lung biopsy revealed *Pneumocystis carinii, Cryptococcus* *neoformans*, and cytomegalovirus. Serum IgG, IgA, and IgM concentrations were elevated. The percentage of T-lymphocytes was decreased, but T-cell response to mitogens was normal. The infant died of respiratory insufficiency at 7½ months of age. At autopsy, the thymus, spleen, and lymph nodes showed lymphocyte depletion. His parents were residents of Brooklyn, New York; their health status is unknown.

Case 3: The infant, a Haitian male weighing 8 lb, was born in November 1981 following a normal, full-term pregnancy. He was apparently healthy until 5 months of age, when he was hospitalized with fever and respiratory distress. On examination, he had hepatosplenomegaly. A chest x-ray showed bilateral pulmonary infiltrates. Despite antibiotic therapy, the infant's condition deteriorated, and an open lung biopsy revealed PCP. Immunologic studies showed elevated serum concentrations of IgG, IgA and IgM, decreased percentage of T-lymphocytes, and impaired T-cell function in vitro. The infant died in May 1982. At autopsy, no cardiovascular anomalies were seen; the thymus was hypoplastic, but all lobes were present. His parents were residents of Newark, New Jersey; their health status is unknown.

Case 4: The infant, a white female weighing 5 lb, was born in April 1982 following a normal 35-week pregnancy. She was well until 2 months of age, when oral and vaginal *Candida* infections were noted. She responded to antifungal therapy, but at 5 months, candidiasis recurred, and she had hepatosplenomegaly. Immunologic evaluation showed that serum IgG, IgA, and IgM levels, normal at 2 months, were now elevated. The percentage of T-lymphocytes was decreased, and lymphocyte response to alloantigen was impaired. At 6 months of age, the infant was hospitalized because of fever and cough. Open lung biopsy revealed PCP. Despite appropriate antibiotic therapy, she died in November 1982.

The infant's mother, a 29-year-old resident of San Francisco, is a prostitute and intravenous drug abuser with a history of oral candidiasis and mild lymphopenia. She has had two other female children by different fathers. These half-sisters also have unexplained cellular immunodeficiency; one died of PCP. The children had not lived together.

None of the four infants described in the case reports was known to have received blood or blood products before onset of illness.

Other cases with opportunistic infections: Six additional young children with opportunistic infections (five with PCP, one with *M. avium-intracellulare*) and unusual cellular immunodeficiencies are under investigation. Three are male. All six children have died. One was a half-sister of the infant in Case 4.

Other cases without opportunistic infections: Physicians from New York City, New Jersey, and California have reported another 12 young children with immunodeficiencies similar to those seen in cases 1-4 but without life-threatening opportunistic infections. One is the other half-sister of the infant in Case 4. All the children are living; their ages range from 1 to 4 years. Eight are male. Clinical features seen in these 12 infants include: failure to thrive (83%), oral candidiasis (50%), hepatosplenomegaly (92%), generalized lymphadenopathy (92%), and chronic pneumonitis without a demonstrable infection (83%). Of the nine mothers for whom information is available, seven are reported to be intravenous drug abusers. None is Haitian.

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City/County Health Dept, San Francisco; J Chin, MD, State Epidemiologist, California State Dept of Health Svcs; Field Svcs Div, Epidemiology Program Office, AIDS Activity, Div of Host Factors, Center for Infectious Diseases, CDC.

Editorial Note: The nature of the immune dysfunction described in the four case reports is unclear. The infants lacked the congenital anomalies associated with Di George's syndrome. The immunologic features of high-normal or elevated immunoglobulin levels and T-lymphocyte depletion are not typical of any of the well-defined congenital immunodeficiency syndromes. They have, however, been described in a few children with variants of Nezelof's syndrome, a rare, poorly characterized illness of unknown etiology (*1,2*). The occurrence of immune deficiency in the infant in case 4 and in her half-sisters raises the possibility of an inherited disorder. However, inheritance would have to have occurred in a dominant manner, an inheritance pattern not previously described for immunodeficiency resembling that seen in these half-sisters.

It is possible that these infants had the acquired immune deficiency syndrome (AIDS). Although the mother of the infant in case 1 was not studied immunologically, her death from PCP was probably secondary to AIDS. The mothers of the other three infants were Haitian or intravenous drug abusers, groups at increased risk for AIDS (*3*). The immunologic features described in the case reports resemble those seen both in adults with AIDS (*4*) and in a child reported to have developed immunodeficiency following receipt of blood products from a patient with AIDS (*5*). Case 2 had essentially normal T-cell responses to mitogens in vitro. This finding is atypical for AIDS, but it has been seen in a few adult AIDS cases (*6*).

Although the etiology of AIDS remains unknown, a series of epidemiologic observations suggests it is caused by an infectious agent (*3,5,7-9*). If the infants described in the four case reports had AIDS, exposure to the putative "AIDS agent" must have occurred very early. Cases 2-4 were less than 6 months old when they had serious opportunistic infections. Case 1 had oral candidiasis beginning at 3 months of age, although *M. avium-intracellulare* infection was not documented until 17 months. Transmission of an "AIDS agent" from mother to child, either in utero or shortly after birth, could account for the early onset of immunodeficiency in these infants.

The relationship between the illnesses seen in the reported cases with severe opportunistic infection and the 12 infants without such infections is unclear at present. The immune dysfuction seen in the children and the sociodemographic profiles of the mothers appear similar in both groups. Prospective study of the 12 children is necessary to define the natural history of their illnesses and the possible relationship of their illnesses to AIDS.

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Erratum, Vol. 31, No. 48

p. 641. In the article, "Alcohol-Related Highway Fatalities among Young Drivers—United States," the ratios in the fifth and sixth paragraphs should be: 43.2/100,000 and 28.7/100,000, respectively, instead of as published.

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CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Perspectives in Disease Prevention and Health Promotion

Exposure-Related Hypothermia Deaths — District of Columbia, 1972-1982

During the ten cold-weather seasons of 1972-1973 through 1981-1982, 63 exposure-related hypothermia deaths (ERHD)* were recorded on death certificates within the District of Columbia (DC). Two additional ERHD cases have been recorded through December 20 of the current winter season. Most deaths occurred in December and January, particularly around Christmas. Inadequate housing and prior ethanol ingestion contributed to ERHD.

All were investigated (including autopsy) by the Office of the Chief Medical Examiner. Complete data were available on the 57 ERHD that occurred before January 1982. Fifty-four victims were DC residents, for an overall ERHD rate of 0.88 resident deaths/100,000 person years.† Resident ERHD rates/100,000 person years among black males (n = 42), white males (n = 7), black females (n = 4), and white females (n = 1) were 1.91, 1.01, 0.17, and 0.12, respectively. Corresponding relative risks were 15.9, 8.4, 1.4, and 1.0. Median age was 50 years. The highest age-specific death rate occurred in the 50-54-year range (n = 10; 3.0 deaths/100,000 person years). Seven victims (13.0%) were 65 years of age or older; one was less than 32 years old.

ERHD ranged from two to 12 per season and were noted in all months from October through April (Figure 1). Thirty-nine (72%) of the 54 resident ERHD occurred in December or January during these 9 years; 22 (56%) of these 39 occurred in the 6 coldest of these 18 months ($p < 0.005$). Eleven (20%) ERHD victims were found during Christmas weeks (Dec 24-30). Thirteen others (24%) were found during the subsequent two-week periods. Only 10 (19%) of the 54 DC resident ERHD victims survived long enough to reach hospitals. At least 15 (33%) of 46 victims had been undernourished (< 5th percentile of weight for height) (*1*). Pre-existing disease (convulsive disorders, diabetes, uremia) was a possible contributing factor in at least seven (13%) of these cases and trauma or accident in an additional four (7%). Twenty-seven victims (50%) had inadequate housing. Two of these were found dead in unheated apartments; for the remaining 25, no fixed address, other than abandoned buildings or vehicles, could be established despite extensive investigation. Fifteen others (28%) lived

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*ERHD cases were defined as deaths occurring in appropriate environmental circumstances of persons without trauma or apparent natural disease sufficient to cause death. Body temperature was less than 35 C (95 F) for all hospitalized ERHD victims for whom data were available.

†Population estimates from Office of Planning and Development, DC Government.

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Hypothermia Deaths – Continued

alone. Twenty-one (40%) of 52 resident ERHD victims for whom data were available were found in census tracts where the mean family income was less than $10,000. These census tracts contain only 13% of the total DC population ($p < 0.0001$). Blood ethanol levels were measured in 52 ERHD victims. Twenty-five (48%) of these victims had blood ethanol levels greater than 0.15 g/dl, a level felt to be associated with loss of central thermoregulatory ability (*2*). Eleven others (21%) had lower levels of ethanol in their blood. Victims with inadequate housing were less likely to have blood ethanol levels less than 0.15 g/dl (eight of 26) than were victims with adequate housing (17 of 26, $p = 0.010$, Fisher exact test). Twenty (37%) of the 54 were found partially or completely undressed. No victims were found with hats. Because their confused mental states were believed due to ethanol intoxication, several ERHD victims were taken to detoxification centers before their hypothermia was recognized. Only nine (17%) of these 54 victims had been reported missing. Investigators' reports indicated, however, that a substantial number had had contact with a community agency (hospital, police department, social agency) within hours to days before death.

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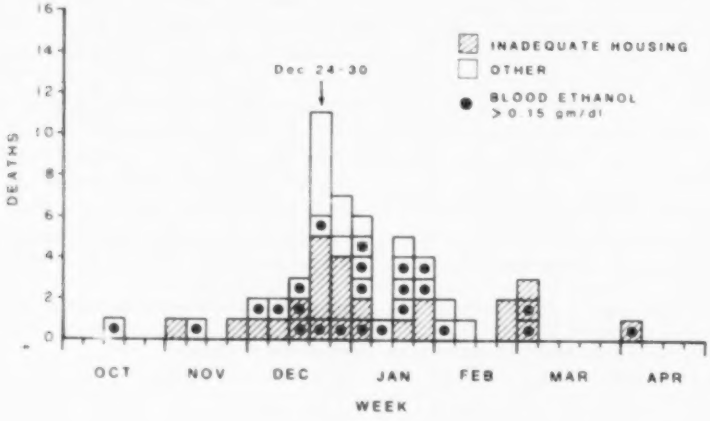
Editorial Note: Lack of adequate housing, acute ethanol intoxication, or both were noted in 82% of the ERHD victims in Washington, D.C. over this 10-year period. The higher rates of ERHD found in this study among blacks and among males are consistent with trends in previous death certificate data (*3*). In addition, ethanol-intoxication association, advanced age, and adverse social and economic circumstances have been described among patients hospitalized with hypothermia in the United Kingdom (*4,5*) and the United States (*6,7*). DC data suggest that younger and middle-aged adults, particularly nonwhite males, may comprise a larger proportion of those at risk from fatal hypothermia than previously thought. This difference may in part reflect the hospital-based nature of earlier studies (*4-7*) in that patients who survive to reach hospitals may represent a different subgroup of those at risk of hypothermia. Alternatively, the difference may represent economic circumstances different from those present in the earlier studies (*4-7*).

FIGURE 1. Exposure-related hypothermia deaths and associated factors by week – Washington, D.C., October 1, 1972 – April 30, 1981



Hypothermia Deaths – Continued

The seemingly irrational undressing noted in many of these ERHD has previously been reported from Scandinavia (*8*). That report suggested that when core body temperature falls to a critical level, peripheral vasoconstriction fails. The resulting sudden vasodilation could lead to an exaggerated sensation of heat and a consequent attempt by the victim to undress (*8*).

In addition to ongoing public education efforts (*9*), public safety personnel (police, ambulance crews) should receive training to recognize hypothermia victims, with particular emphasis on such aspects as confusion and unsteady gait, which are similar to symptoms of ethanol intoxication. Persons taken to detoxification centers during cold weather should have their temperatures taken on admission. Homeless persons found outside or removed from buildings during cold weather should be provided with alternative heated shelters. A clothed person loses the greatest amount of heat through the head, especially when hatless (*10*). The importance of adequate head covering for all people exposed to cold needs to be brought to public attention.

Although a large body of literature exists on various methods of resuscitation from hypothermia once it is recognized (*10,11*), one recent study in a northeastern U.S. area found that only 20% of hospital emergency rooms have low temperature thermometers (*12*). Hospitals should ensure that their emergency room staffs are familiar with symptoms of and initial therapy for hypothermia (*10,13*) and have access to low temperature thermometers. Based on a finding of hypoglycemia in a high proportion of patients with both ethanol intoxication and hypothermia, intravenous 50% dextrose has recently been recommended for use in resuscitation of hypothermic patients, unless serum glucose is known to be normal or high (*11*). During cold weather, homeless or intoxicated persons released from hospitals or jails should be sent directly to shelters.

Further studies are needed to more clearly define both the epidemiology and appropriate prevention of ERHD.

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Current Trends

Prevention of Secondary Cases of *Haemophilus influenzae* Type b Disease*

Haemophilus influenzae type b is the leading cause of meningitis in the United States, resulting in an estimated 8,000-11,000 cases per year (*1,2*). Age-specific incidence rates are highest among children less than 1 year of age and decrease steadily thereafter. The case-fatality ratio is approximately 3%-7%, and neurologic sequelae are common. In addition, *H. influenzae* type b causes an estimated 6,000 cases a year of other invasive diseases, including epiglottitis, pneumonia, cellulitis, and bacteremia (*3*).

An experimental vaccine composed of the polysaccharide capsule of the organism has been shown to be effective in children over the age of 18 months (*4*). However, the vaccine is poorly immunogenic and not protective in children under this age, the group at highest risk of disease. Work is continuing on development of an efficacious vaccine for this age group.

Recent studies have shown an increased risk of disease among close contacts of persons with *H. influenzae* disease, suggesting a need to consider chemoprophylaxis for prevention of secondary cases, pending development of a satisfactory vaccine.

Risk of secondary disease: Six studies have estimated the risk of disease among household contacts of cases in the month following onset of disease in the index case (*3,5-9*). Attack rates varied substantially with age; the rate was 3.8% among children under 2 years of age, 1.5% among children 2-3 years of age, 0.1% among children 4-5 years of age, and 0% among contacts over the age of 6 years. The attack rate for all ages was 0.3%. This represents approximately a 600-fold increase in risk, compared with the risk in the population at large. Fifty percent of associated cases occurred within 3 days of onset in the index case and 75% within 7 days (Figure 2 [*3,5-9*]).

Whether increased risk of disease occurs in day-care center contacts of children with invasive *H. influenzae* disease has not been resolved. Numerous clusters of cases in day care-centers have been reported, but only one study has looked systematically at attack rates in day-care center contacts; in that study, 1% (1/91) of day care-center contacts less than 4 years of age acquired invasive disease in the month after the index case, compared with 2% (3/131) of household contacts less than 4 years of age (*9*). Carriage rates among contacts were only slightly higher in households than in day-care centers (Figure 3) (*9*). This study looked only at contacts in the same classroom as the index case.

It is not known whether the risk of secondary cases is different for persons in contact with a case with meningitis than for those in contact with cases with epiglottitis or other invasive *H. influenzae* diseases. Carriage rates among contacts of meningitis patients have been reported as lower than carriage rates among contacts of patients with other clinical syndromes (*9*), and secondary cases have been reported among both groups. At this time, all index cases with invasive *H. influenzae* disease are considered to increase the risk for contacts.

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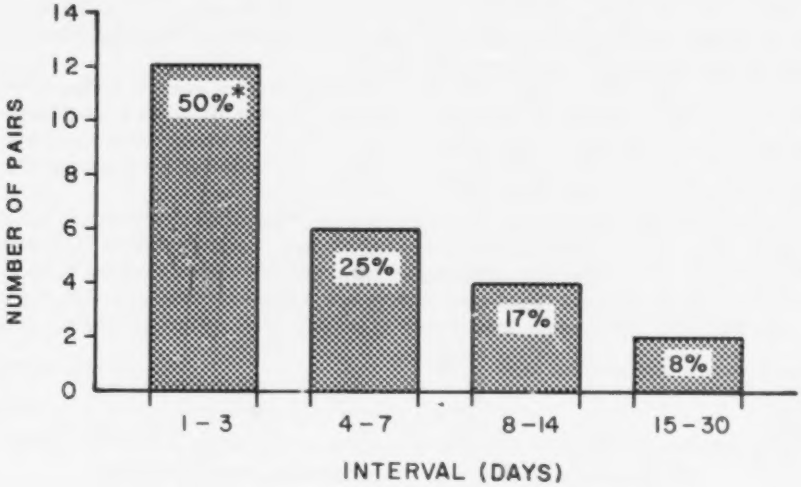
*These recommendations were developed in consultation with James Chin, MD, Chief, Infectious Diseases Section, California Department of Health Services; Vincent A. Fulginiti, MD, Chairman, Committee on Infectious Diseases, American Academy of Pediatrics; Gregory R. Istre, MD, Acting State Epidemiologist, Oklahoma State Department of Health; Arnold L. Smith, MD, Chief, Division of Infectious Diseases, Children's Orthopedic Hospital and Medical Center, Seattle, Washington; and Joel I. Ward, MD, Director of Medical Epidemiology and Assistant Professor of Pediatrics and Medicine, Harbor-UCLA Medical Center, Torrance, California.

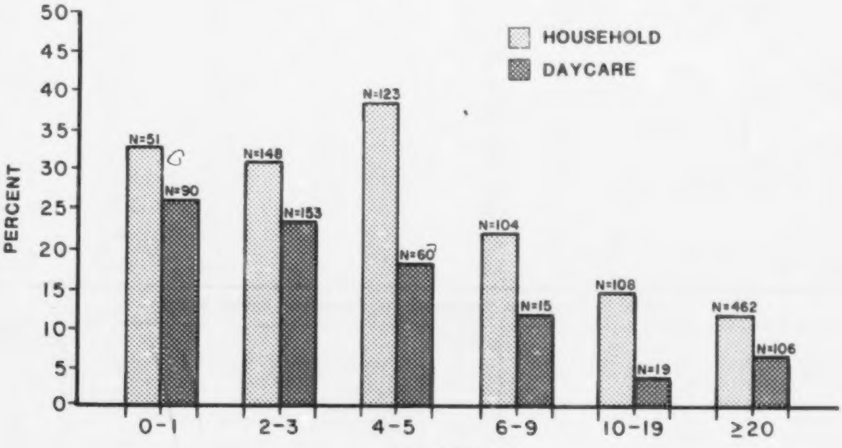
Haemophilus influenzae – Continued

FIGURE 2. Interval between onset of primary and associated cases of *Haemophilus influenzae* type b disease



*Represents percentage of all pairs.

FIGURE 3. Carriage rates of *H. influenzae* type b in contacts, by age of contact and setting exposed



Haemophilus influenzae – Continued

Efficacy of chemoprophylaxis: Initial studies focused on usefulness of various antimicrobial agents to eliminate nasopharyngeal carriage of *H. influenzae* type b. Ampicillin, trimethoprim-sulfamethoxazole, erythromycin-sulfisoxazole, and cefaclor were shown to eliminate carriage in fewer than 70% of culture-positive contacts. Also, in persons with *H. influenzae* disease, pharyngeal carriage of the organism has been shown to persist following intravenous therapy with chloramphenicol or ampicillin.

Rifampin in a dosage of 10 mg/kg per dose* administered twice a day for 2 days, the regimen currently recommended for meningococcal chemoprophylaxis, failed to eradicate carriage in as many as 36% of culture-positive individuals (*9,10*). However, rifampin in a dosage of 20 mg/kg per dose* once daily for 4 days (maximum dose 600 mg) eradicated carriage in 90%-100% of contacts treated (*9,11,12*).

A recent multicenter, randomized, placebo-controlled trial among both household and day-care center contacts has evaluated the efficacy of rifampin chemoprophylaxis in preventing secondary cases of *H. influenzae* disease. The study included day-care centers in which at least 75% of those present received chemoprophylaxis. Pilot studies had demonstrated that, if fewer than 75% participated, rates of new acquisition of *H. influenzae* carriage among

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*Dose is halved for neonates—see below.

(Continued on page 679)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	50th Week Ending: December 18, 1982	50th Week Ending: December 19, 1981	50th Week Ending: Median 1977-1981	Cumulative, First 50 Weeks: December 18, 1982	Cumulative, First 50 Weeks: December 19, 1981	Cumulative, First 50 Weeks: Median 1977-1981
Aseptic meningitis	160	157	149	8,859	9,265	7,569
Brucellosis	1	6	5	149	173	173
Encephalitis: Primary (arthropod-borne & unspec.)	29	24	19	1,405	1,478	1,150
Post-infectious	3	1	6	62	83	210
Gonorrhea: Civilian	20,856	20,470	21,315	920,101	963,060	967,245
Military	348	791	601	24,918	27,216	25,893
Hepatitis: Type A	447	576	625	21,949	24,507	28,175
Type B	429	428	395	20,785	19,957	15,842
Non A, Non B	50	N	N	2,292	N	N
Unspecified	158	214	206	8,475	10,411	10,089
Legionellosis	12	N	N	539	N	N
Leprosy	24	-	3	221	235	171
Malaria	9	16	16	990	1,313	788
Measles (rubeola)	19	42	166	1,649	2,947	13,354
Meningococcal infections: Total	55	77	46	2,810	3,356	2,482
Civilian	55	77	46	2,797	3,343	2,462
Military	-	-	-	13	13	19
Mumps	67	156	267	5,055	4,567	13,389
Pertussis	34	34	34	1,679	1,195	1,610
Rubella (German measles)	22	13	94	2,239	2,021	11,504
Syphilis (Primary & Secondary): Civilian	752	752	579	31,638	30,023	24,135
Military	9	2	3	426	357	307
Tuberculosis	579	616	678	24,782	26,238	26,604
Tularemia	6	12	9	244	276	188
Typhoid fever	11	10	5	389	559	506
Typhus fever, tick-borne (RMSF)	3	12	7	976	1,175	1,113
Rabies, animal	56	99	61	5,896	6,922	4,806

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	7
Botulism	76	Paralytic	7
Cholera	-	Psittacosis	116
Congenital rubella syndrome	6	Rabies, human	-
Diphtheria	3	Tetanus (Minn. 2, Iowa 1, Ala. 1, Tex. 1)	79
Leptospirosis (La. 1, Tex 2)	72	Trichinosis	83
Plague	18	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	43

TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 18, 1982 and December 19, 1981 (50th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum 1982	Cum 1982	Cum 1982	Cum 1982	Cum 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	160	149	1,405	62	920,101	963,060	447	429	50	158	12	221
NEW ENGLAND	6	3	56	6	22,212	23,236	8	17	1	3	-	2
Maine	-	-	-		1,174	1,278	-	-				-
N.H.	-	-	8	-	707	862	1	2	-	1		
Vt.	-	-	-		408	419	1	2				
Mass.	1	-	26	-	9,901	9,839	1	3	-			-
R.I.	-	-		1	1,517	1,443	3	4			-	-
Conn.	5	3	22	5	8,505	9,395	2	6	1	2		2
MID. ATLANTIC	21	3	147	14	117,625	116,194	56	68	2	17	3	29
Upstate N.Y.	3	3	62	3	19,692	20,362	6	16	2	2		3
N.Y. City	9	-	20	-	48,080	47,437	12	10		6		24
N.J.	4	-	24		21,375	21,790	5	14		1		1
Pa.	5	-	41	11	28,478	26,605	33	28		8	3	1
E.N. CENTRAL	22	5	348	12	129,125	143,295	45	52	3	13	3	10
Ohio	9	1	134	5	35,214	44,744	14	14	1	4	3	
Ind.	-	-	95	3	15,738	11,805	3	1	-	5		
Ill.		3	18	2	34,444	41,896	9	13	2			8
Mich.	13	1	72	-	32,015	31,709	19	24		4	-	
Wis.	-	-	29	2	11,714	13,141						2
W.N. CENTRAL	11	17	101	4	43,155	46,061	5	19	1	2		8
Minn.	-	1	27	1	6,305	7,358	2	5				4
Iowa	5	5	54	1	4,654	5,041	1	4		1		
Mo.	8	4	9		20,363	21,220	1	10	1	1		2
N. Dak.		1			556	589						
S. Dak.	-	1	-	1	1,096	1,243	1					1
Nebr.		2	6	-	2,542	3,446						1
Kans.		3	5	1	7,639	7,164						
S. ATLANTIC	22	28	198	9	240,702	236,832	57	104	16	17	6	11
Del.					4,013	3,812				1		
Md.			25		30,181	28,215	7	13	3		1	4
D.C.			-		14,764	13,443	-	3				
Va.	2	10	44	1	19,335	21,661		12	1	3	3	1
W. Va.	-		16	-	2,693	3,485	2	2				
N.C.	2	-	30	1	37,811	36,387		10		4		
S.C.	1	2	2	-	23,385	23,003	13	13				
Ga.	2	3	14	-	47,311	49,177	17	30	5	5		1
Fla.	15	13	67	7	61,209	57,649	18	21	7	4	2	5
E.S. CENTRAL	31	13	68	6	80,274	80,313	27	33	2	6		
Ky.	15		1		10,709	10,022	8	5	2	-		
Tenn.	3	8	31	1	31,333	30,580	7	9		5		
Ala.	10	4	18	5	23,972	24,046	7	16		1		
Miss.	3	1	18		14,260	15,665	5	3				
W.S. CENTRAL	15	45	224	1	127,969	128,026	122	40	2	61		28
Ark.		7	21	-	10,323	9,822		2		9		
La.	2	8	29		23,864	22,504	49	14	1	11		
Okla.	2	8	40	-	14,066	13,878	16	3	1	3		
Tex.	11	22	134	1	79,716	81,822	57	21		38		28
MOUNTAIN	3	3	56	2	30,856	38,123	20	14	7	19		2
Mont.	-	2	-	-	1,294	1,396		1	1			
Idaho	2	1	-		1,479	1,699	2					1
Wyo.	-	-	1		937	1,006	-					
Colo.	-	-	19	1	8,300	10,151	4	2		1		
N. Mex.	-	-	1		4,272	4,328	6	3	2			
Ariz.	-	-	11	-	7,925	11,404	5	4		15		
Utah	1	-	19	1	1,519	1,865	2	-	1			1
Nev.	-	-	5		5,130	6,274	1	4	3	3		
PACIFIC	29	32	207	8	128,183	150,980	107	82	16	20		131
Wash.	-	1	13	1	11,026	12,732	-	4	1	2		15
Oreg.	-	-	4		7,594	9,005	15	3	1	-		2
Calif.	25	30	172	7	103,731	122,384	91	74	14	18		76
Alaska	2	1	12	-	3,308	3,930	1	1				1
Hawaii	2	-	6	-	2,524	2,929	-	-				37
Guam	U	-	-	1	118	116	U	U	U	U	U	1
P.R.	-	-	1	3	2,548	3,165	2	2		2	-	3
V.I.	-	-	-	-	241	251	-	-		-	-	
Pac. Trust Terr.	U	-	-	-	388	437	U	U	U	U	U	44

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 18, 1982 and December 19, 1981 (50th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum 1982	1982	Cum 1982	Cum 1981	1982	Cum 1982	1982	Cum 1982	1982	1982	Cum 1982	Cum 1981
UNITED STATES	9	990	19	1,649	2,947	55	2,810	67	5,055	34	22	2,239	2,021
NEW ENGLAND	1	51	-	16	86	3	156	1	194	5	-	19	123
Maine	-	-	-	-	5	1	12	-	43	-	-	-	33
N H	-	2	-	3	9	-	20	-	18	5	-	11	54
Vt	-	-	-	2	3	-	11	-	7	-	-	-	-
Mass	-	28	-	5	59	-	44	1	84	-	-	2	23
R I	-	3	-	-	-	-	16	-	18	-	-	1	-
Conn	1	18	-	6	10	2	53	-	24	-	-	5	13
MID ATLANTIC	2	173	1	170	992	11	504	6	339	10	-	109	229
Upstate N Y	-	33	-	113	226	2	172	3	97	-	-	53	114
N Y City	2	68	-	44	108	3	98	-	47	8	-	36	55
N J	-	35	-	6	59	-	104	2	54	-	-	18	47
Pa	-	37	1	7	601	6	130	1	141	2	-	2	13
E N CENTRAL	-	85	2	79	92	7	377	28	2,511	7	1	197	432
Ohio	-	13	-	1	20	5	129	14	1,742	2	-	4	3
Ind	-	4	-	2	9	2	41	1	46	3	-	29	137
Ill	-	36	-	24	26	-	96	3	209	1	-	73	122
Mich	-	26	2	52	34	-	80	9	391	1	1	50	43
Wis	-	6	-	-	3	-	31	1	123	-	-	41	127
W N CENTRAL	-	32	-	49	10	2	142	8	639	-	-	62	81
Minn	-	5	-	-	3	-	32	-	456	-	-	7	8
Iowa	-	8	-	-	1	-	12	8	61	-	-	-	5
Mo	-	10	-	2	1	-	42	-	21	-	-	38	2
N Dak	-	2	-	-	-	-	6	-	-	-	-	-	-
S Dak	-	-	-	-	-	2	11	-	1	-	-	1	-
Nebr	-	4	-	3	4	-	14	-	1	-	-	-	1
Kans	-	3	-	44	1	-	25	-	99	-	-	16	65
S ATLANTIC	5	132	11	227	493	12	582	3	317	8	-	96	148
Del	-	4	-	-	-	-	1	-	12	-	-	1	2
Md	-	20	-	4	5	1	43	1	34	-	-	34	1
D C	-	4	-	1	1	-	5	-	-	-	-	-	-
Va	1	40	-	14	16	2	70	1	42	-	-	12	8
W Va	-	7	-	3	9	-	10	-	118	3	-	3	22
N C	-	8	-	2	3	1	111	1	22	-	-	2	5
S C	-	4	-	-	2	-	70	-	17	-	-	1	8
Ga	1	17	-	-	111	1	112	-	26	-	-	18	39
Fla	3	28	11	203	346	7	160	-	46	5	-	25	63
E S CENTRAL	-	10	-	9	6	2	168	1	67	2	2	49	40
Ky	-	5	-	1	2	-	25	1	22	-	2	31	26
Tenn	-	-	-	6	2	2	76	-	25	-	-	2	13
Ala	-	2	-	2	2	-	54	-	10	-	-	-	1
Miss	-	3	-	-	-	-	13	-	10	2	-	16	-
W S CENTRAL	-	67	-	170	877	8	324	6	262	-	6	127	192
Ark	-	5	-	-	23	-	16	-	8	-	-	1	7
La	-	5	-	14	4	4	67	-	6	-	-	1	9
Okla	-	8	-	30	6	-	32	-	-	-	-	3	3
Tex	-	49	-	126	844	4	209	6	248	-	6	122	173
MOUNTAIN	-	31	-	28	39	2	118	2	116	-	7	92	97
Mont	-	1	-	-	-	-	7	-	7	-	-	6	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	7	4
Wyo	-	-	-	1	1	-	5	-	2	-	1	8	12
Colo	-	12	-	7	11	1	49	-	19	-	-	6	30
N Mex	-	3	-	-	9	-	15	-	-	-	-	6	5
Ariz	-	9	-	17	7	-	21	-	54	-	3	21	22
Utah	-	4	-	3	-	1	12	2	22	-	3	26	10
Nev	-	-	-	-	10	-	2	-	8	-	-	12	11
PACIFIC	1	409	5	901	352	8	439	12	610	2	6	1,488	679
Wash	-	24	-	42	3	2	52	3	102	-	1	58	106
Oreg	-	15	-	24	5	3	82	-	-	-	-	7	53
Calif	1	362	5	829	337	2	289	6	472	2	4	1,408	504
Alaska	-	1	-	1	-	1	12	3	15	-	-	5	1
Hawaii	-	7	-	5	7	-	4	-	21	-	1	10	15
Guam	U	1	U	6	6	U	2	U	5	U	U	2	3
P R	-	4	-	137	306	-	9	1	100	-	-	13	6
V I	-	-	-	-	24	-	2	-	3	-	-	2	1
Pac Trust Terr	U	-	U	1	1	U	5	U	6	U	U	-	2

U Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 18, 1982 and December 19, 1981 (50th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum 1982	Cum 1981	1982	Cum 1982	Cum 1982	1982	Cum 1982	1982	Cum 1982	Cum 1982
UNITED STATES	31,638	30,023	579	24,782	244	11	389	3	976	5,896
NEW ENGLAND	591	579	15	717	7		18	1	12	42
Maine	8	5	1	54						26
N.H.	5	16		30					1	1
Vt.	4	17	1	11			2			2
Mass.	396	366	5	453	7		14		6	7
R.I.	27	35	5	36					2	
Conn.	151	140	3	133			2	1	3	6
MID. ATLANTIC	4,251	4,292	63	4,150	7	2	69		45	200
Upstate N.Y.	420	431	13	722	7	1	12		16	110
N.Y. City	2,527	2,548	16	1,568			36		3	
N.J.	618	597	7	810		1	13		14	17
Pa.	686	716	27	1,050			8		12	73
E.N. CENTRAL	1,769	2,259	100	3,701	1		37		88	587
Ohio	319	319	13	593			13		77	79
Ind.	195	286	12	451			2		2	73
Ill.	880	1,205	48	1,597			8		8	297
Mich.	276	359	23	849			11			7
Wis.	99	90	4	211	1		3		1	131
W.N. CENTRAL	531	657	24	749	40	1	17		34	1,172
Minn.	142	186	2	141			8			209
Iowa	34	29		73	3		1		4	380
Mo.	279	384	20	364	27	1	5		13	121
N. Dak.	7	12		15						95
S. Dak.	2	2		33	1				4	101
Nebr.	15	10	1	30	4		2		2	122
Kans.	52	34	1	93	5		1		11	144
S. ATLANTIC	8,654	7,925	133	5,185	13		46	1	520	1,257
Del.	25	16	2	47						2
Md.	481	557	18	604	1		10		50	92
D.C.	469	635	6	246						
Va.	598	679	5	584	5		4	1	74	706
W. Va.	30	32	4	152			4		8	50
N.C.	709	628	34	775			3		224	65
S.C.	554	545	17	514	6		3		106	65
Ga.	1,759	1,907	21	848			1		51	209
Fla.	4,029	2,926	26	1,415	1		21		7	68
E.S. CENTRAL	2,174	1,955	74	2,270	8		20		97	633
Ky.	127	106	20	595			4		1	128
Tenn.	619	672	42	750	6		4		59	354
Ala.	829	597	8	608			9		17	144
Miss.	599	580	4	317	2		3		20	7
W.S. CENTRAL	8,397	7,304	46	2,978	124	5	46	1	160	1,143
Ark.	217	159	3	345	73		8		22	154
La.	1,806	1,647		447	4		3		2	32
Okla.	181	170	16	332	35		3		76	189
Tex.	6,193	5,328	27	1,854	12	5	32	1	60	768
MOUNTAIN	806	731	20	687	34		14		14	277
Mont.	5	11	3	42	4				5	93
Idaho	25	19		29	1				4	11
Wyo.	16	18		6	5				1	21
Colo.	230	231	5	97	7		3		1	48
N. Mex.	187	125	2	115	5				1	23
Ariz.	215	173	10	290			8			59
Utah	23	29		43	12		2			18
Nev.	105	125		65			1		2	4
PACIFIC	4,465	4,321	104	4,345	10	3	122		6	585
Wash.	160	188	6	277	1		9			8
Oreg.	111	113	5	191	2		4		1	5
Calif.	4,072	3,933	89	3,536	6	3	105		5	487
Alaska	15	14		89	1		1			85
Hawaii	107	73	4	252			3			
Guam	1		U	39		U		U		
P.R.	784	627	2	454			3			50
V.I.	25	16		1						
Pac. Trust Terr.			U	114		U	1	U		

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending December 18, 1982 (50th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	666	465	153	26	8	14	55
Boston, Mass	168	113	39	10	2	4	29
Bridgeport, Conn	49	36	10	2		1	4
Cambridge, Mass	23	18	5				1
Fall River, Mass	29	22	7				
Hartford, Conn	65	46	12	5		2	4
Lowell, Mass	27	16	10	1			2
Lynn, Mass	14	10	3	1			
New Bedford, Mass	25	15	7	2	1		
New Haven, Conn	37	22	11	1	2	1	3
Providence, R.I.	74	53	18		1	2	2
Somerville, Mass	7	7					
Springfield, Mass	48	36	10	1		1	4
Waterbury, Conn	27	17	7	1	1	1	1
Worcester, Mass	73	54	14	2	1	2	5
MID ATLANTIC	2,803	1,845	618	194	63	83	109
Albany, N.Y.	40	27	6	5	1	1	1
Allentown, Pa	22	20	2				2
Buffalo, N.Y.	150	103	30	8	4	5	10
Camden, N.J.	53	34	13	3	2	1	
Elizabeth, N.J.	25	20	3	2			
Erie, Pa †	31	18	8	5			3
Jersey City, N.J.	44	33	7	2		2	1
N.Y. City, N.Y.	1,507	999	332	115	33	28	56
Newark, N.J.	58	32	17	5	1	3	3
Paterson, N.J.	40	22	10	2	2	4	1
Philadelphia, Pa †	373	201	98	30	14	30	15
Pittsburgh, Pa †	74	45	23	2	1	3	
Reading, Pa	18	14	1	2	1		2
Rochester, N.Y.	142	111	22	3	3	3	6
Schenectady, N.Y.	24	16	6	1		1	
Scranton, Pa †	31	28	3				3
Syracuse, N.Y.	86	62	18	3	1	2	1
Trenton, N.J.	32	20	10	2			1
Utica, N.Y.	22	19	3				1
Yonkers, N.Y.	31	21	6	4			3
E.N. CENTRAL	2,175	1,410	499	134	48	84	68
Akron, Ohio	61	46	10	1	2	2	
Canton, Ohio	58	41	15	1		1	3
Chicago, Ill	491	304	128	31	9	19	7
Cincinnati, Ohio	152	100	29	12	7	4	11
Cleveland, Ohio	164	97	54	7	1	5	6
Columbus, Ohio	135	82	31	3	9	10	2
Dayton, Ohio	91	59	21	6	1	4	
Detroit, Mich	278	172	66	28	4	8	6
Evansville, Ind	38	28	8	1	1		1
Fort Wayne, Ind	46	27	11	4	2	2	1
Gary, Ind	16	7	9	1			1
Grand Rapids, Mich	35	27	5	2	1		1
Indianapolis, Ind	162	100	29	16	4	13	5
Madison, Wis	49	37	8	2	1	1	3
Milwaukee, Wis	141	97	29	5	3	7	4
Peoria, Ill	42	32	7	1	1	1	9
Rockford, Ill	44	31	8	3		2	1
South Bend, Ind	44	26	12	4		2	3
Toledo, Ohio	81	65	7	4	2	3	3
Youngstown, Ohio	47	32	13	2			1
W.N. CENTRAL	710	486	155	28	15	25	31
Des Moines, Iowa	62	40	13	4	2	3	7
Duluth, Minn	26	18	5	2	1		1
Kansas City, Kans	39	33	2	1	1	1	
Kansas City, Mo	116	76	29	3	1	7	4
Lincoln, Nebr	36	22	10	2	2		2
Minneapolis, Minn	77	57	10	5	3	2	
Omaha, Nebr	91	60	24	3		4	7
St. Louis, Mo	142	90	38	8	3	3	4
St. Paul, Minn	69	51	14		2	2	3
Wichita, Kans	52	39	10			3	3
S. ATLANTIC	1,190	702	311	92	38	47	47
Atlanta, Ga	136	77	37	16	1	5	9
Baltimore, Md	212	121	65	11	7	8	4
Charlotte, N.C.	71	49	13	5	4		1
Jacksonville, Fla	97	54	29	5	7	2	5
Miami, Fla	106	63	25	10	7	1	3
Norfolk, Va	47	30	11	4	1	1	7
Richmond, Va	61	38	13	5	2	3	2
Savannah, Ga	53	33	13	2	3	2	3
St. Petersburg, Fla	95	81	8	4		2	4
Tampa, Fla	79	45	18	6	2	8	4
Washington, D.C.	182	89	62	20	3	8	1
Wilmington, Del	51	22	17	4	1	7	4
E.S. CENTRAL	768	479	194	49	20	26	26
Birmingham, Ala	109	71	24	3	4	7	2
Chattanooga, Tenn	51	32	17		2		7
Knoxville, Tenn	47	34	10	1		2	
Louisville, Ky	134	78	35	14	5	2	4
Memphis, Tenn	179	116	41	14	5	3	7
Mobile, Ala	69	42	19	5	1	2	3
Montgomery, Ala	51	38	7	2	2	2	
Nashville, Tenn	128	68	41	10	1	8	3
W.S. CENTRAL	1,244	741	291	94	54	64	41
Austin, Tex	77	45	16	9	5	2	3
Baton Rouge, La	44	29	10	4	1		
Corpus Christi, Tex	34	23	4	3	3	1	
Dallas, Tex	206	111	63	14	9	9	4
El Paso, Tex	57	34	15	2	4	2	4
Fort Worth, Tex	95	58	15	6	5	11	5
Houston, Tex	200	117	48	19	10	6	3
Little Rock, Ark	46	23	19	2		2	4
New Orleans, La	142	90	37	6	3	6	
San Antonio, Tex	185	111	37	15	10	12	11
Shreveport, La	70	42	13	9	2	4	
Tulsa, Okla	88	58	14	5	2	9	7
MOUNTAIN	644	433	132	45	19	15	38
Albuquerque, N.Mex	86	64	19	1		2	5
Colo. Springs, Colo	48	31	12	3	1	1	7
Denver, Colo	118	78	25	8	6	1	5
Las Vegas, Nev	73	41	18	9	4	1	5
Ogden, Utah	14	7	4	2	1		
Phoenix, Ariz	130	88	28	6	3	5	5
Pueblo, Colo	22	13	4	4	1		1
Salt Lake City, Utah	40	31	2	3	1	3	1
Tucson, Ariz	113	80	20	9	2	2	9
PACIFIC	2,070	1,352	446	147	53	71	92
Berkeley, Calif	23	18	4	1			
Fresno, Calif	63	40	14	2	2	5	1
Glendale, Calif	29	24	3	2			1
Honolulu, Hawaii	68	40	15	7	4	2	6
Long Beach, Calif	106	69	23	8	2	4	1
Los Angeles, Calif	763	501	167	59	17	18	22
Oakland, Calif	68	49	12	4	1	2	2
Pasadena, Calif	29	23	4	1	1		5
Portland, Oreg	121	73	35	7	3	3	7
Sacramento, Calif	76	45	19	7		5	4
San Diego, Calif	207	123	44	14	9	17	18
San Francisco, Calif	147	89	36	5	6	11	3
San Jose, Calif	142	93	29	13	6	1	10
Seattle, Wash	134	97	28	7	1	1	7
Spokane, Wash	50	40	5	5			
Tacoma, Wash	44	28	8	5	1	2	5
TOTAL	12,270††	7,913	2,799	809	318	429	507

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages

those receiving either rifampin or placebo were similar. Four secondary cases occurred among the 800 placebo-treated contacts in contrast to no cases among the 1,166 rifampin-treated contacts (p = 0.03). Analysis of attack rates among children under 4 years old by place of exposure showed a trend toward efficacy in both households (3/131 placebo recipients vs. 0/173 rifampin recipients, p = 0.08) and day-care centers (1/91 placebo recipients vs. 0/264 rifampin recipients, p = 0.26), but the small number of secondary cases precluded detailed analysis of subgroups (*9*). Anecdotal reports have appeared about the failure of rifampin to prevent secondary cases (*13*).

Implementation of chemoprophylaxis: Mixing rifampin with applesauce results in peak serum and salivary concentrations that are not significantly different from those obtained with a specially prepared suspension (*14*). The applesauce mixture is the formulation used in the multicenter trial examining the prevention of secondary cases (*9*). A suspension of rifampin can also be prepared in United States Pharmacopeia (USP) syrup.

Side effects of rifampin in the 20 mg/kg dosage occurred in 20% of recipients, compared with 11% of placebo recipients. Side effects included nausea, vomiting, diarrhea, headache, and dizziness. The rate was similar to the 24% rate of adverse effects in recipients of rifampin at a dosage of 10 mg/kg. No serious adverse reactions occurred (*9*). Orange discoloration of urine was noted in 84% of rifampin recipients. Rifampin usage may also cause discoloration of soft contact lenses or ineffectiveness of oral contraceptives.

Concern has been raised about the possibility of developing rifampin-resistant *H. influenzae* isolates. None of the isolates from index patients or contacts was rifampin-resistant in the multicenter chemoprophylaxis trial (*9*), although an occasional rifampin-resistant strain has been reported. Monitoring strains causing invasive disease for development of rifampin resistance will be important for assessing the continued usefulness of rifampin as a chemoprophylactic agent.

Questions have been raised about the difficulties of coordinating and implementing chemoprophylaxis in a day-care center. These concerns are especially relevant in view of the observation noted previously that chemoprophylaxis is unlikely to be effective if fewer than 75% of contacts actually receive rifampin. Several approaches have been successfully used. The local health department in Sarasota, Florida provided rifampin following consultation with private physicians. The Oklahoma State Health Department distributed a letter from the health department to contacts containing information about the disease and the risk of secondary spread, and recommending that parents contact their physicians for a rifampin prescription. State and local health departments should collaborate with private practitioners to monitor the completeness and timeliness of participation in chemoprophylaxis. Studies to document the risk of secondary cases with and without chemoprophylaxis and to evaluate the rifampin sensitivity of isolates causing invasive disease should also be considered. As such data become available, appropriate changes in these recommendations can be made.

Recommendations: In view of the increased risk of disease in household contacts less than 4 years of age and the efficacy of rifampin in eliminating carriage of *H. influenzae* organisms and preventing secondary cases of disease, it is recommended that:

1. Contacts who develop symptoms suggestive of *H. influenzae* type b disease, such as fever or headache, should be evaluated promptly by a physician.
2. In any household in which a case of invasive *H. influenzae* disease has occurred and in which another child less than 4 years of age resides, all members of the household, including adults, should receive rifampin in a dosage of 20 mg/kg per dose once daily (maximum dose 600 mg/day) for 4 days; dose for neonates (< 1 month) is 10 mg/kg once daily for 4 days.
3. In day-care center classrooms in which a case of *H. influenzae* disease has occurred

Haemophilus influenzae — Continued

and in which children less than 4 years of age are present, all parents should be notified (preferably in writing) regarding occurrence of a case and the possibility of increased risk to their children. The symptoms to look for, the usefulness of rifampin chemoprophylaxis, and the need for prompt medical evaluation if symptoms occur should be stated. All students and staff in the classroom should be considered for chemoprophylaxis according to the above regimen. It should be noted, however, that the data on risk of secondary spread and efficacy of chemoprophylaxis in day-care centers are less complete than for household contacts.

4. Chemoprophylaxis should be instituted as rapidly as possible following onset of disease in the index case. If more than 7 days have passed since the last contact with the index case, chemoprophylaxis is probably not indicated.

5. The index case should be treated with the same rifampin regimen before discharge from the hospital.

6. Nasopharyngeal carriage studies should not be employed as a guide for chemoprophylaxis because of the lack of correlation of carriage with risk of disease and because the time required to complete such studies would delay implementation of chemoprophylaxis.

7. Rifampin should not be used in pregnant women, because it is teratogenic in laboratory animals.

Reported by Respiratory and Special Pathogens Epidemiology Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

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Shigellosis — United States, 1981

In 1981, 15,006 *Shigella* isolations from humans were reported to CDC. While this represented a 6% increase over the 14,168 isolates reported in 1980, it remained 2% below the 15,334 reported during the peak year, 1978 (Figure 4).

Shigella serotypes were reported for 14,278 of the 15,006 isolates and were distributed by serotype as follows: *S. sonnei* —9,423 (66%), *S. flexneri* —4,141 (29%), *S. boydii* —510 (3.6%), and *S. dysenteriae* —204 (1.4%). When compared with 1980, this represented increases of 46% for *S. boydii*, 39% for *S. dysenteriae*, and 9% for *S. sonnei*, and a decrease of 5% for *S. flexneri*. The increases were not confined to one state or region. From 1980 to 1981 *S. sonnei* increased notably in Connecticut (67 to 337), Missouri (50 to 128), Virginia (83 to 889), and Washington (161 to 307); *S. boydii* increased in Texas (43 to 82).

The reported age distribution* of persons from whom isolates were obtained is shown in Figure 5. The rate, highest for 2-year-old children, decreased abruptly for older children and decreased more gradually for adults, except for a slight increase for 20-29 year-olds. Although in the 20-29-year age group a slightly higher isolation rate was reported for women, the isolation rates by sex were similar. The median ages in years of persons from whom isolates were reported were *S. boydii*—9.0, *S. dysenteriae*—16.5, *S. flexneri*—10.0, and *S. sonnei*—6.0.

Since shigellosis is a more significant problem for some population groups than for others, data were tabulated separately for patients residing in certain institutions (e.g., nursing homes, facilities for the mentally ill, and other resident-care centers), and on American Indian reservations. Twenty-nine percent of the reports included data on patient residence at the time of illness onset: 0.9% lived in institutions and 1.5% on Indian reservations. Seventy-four percent of the reported isolates from residents of institutions were *S. flexneri*, and 26% were

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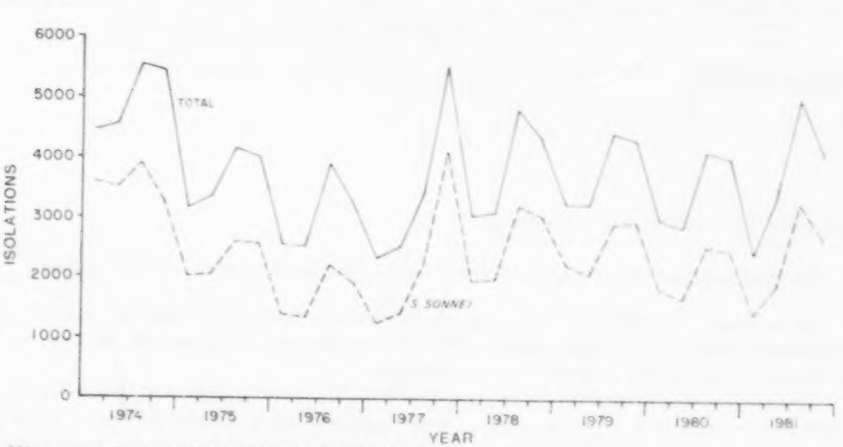
*Age, sex, and type of residence were unavailable for California.

FIGURE 4. *Shigella* – reported isolations from humans, by quarter – United States,* 1974-1981



*No reports from the Virgin Islands after 1969.

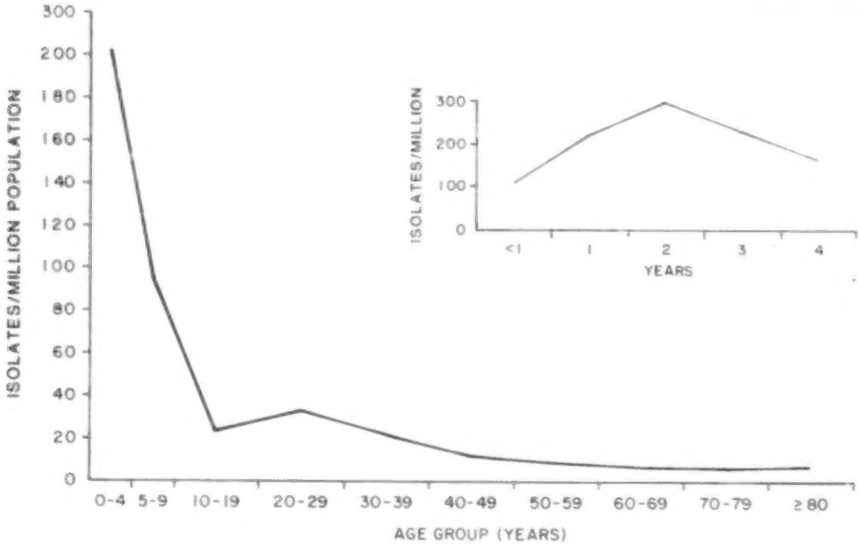
Shigellosis — Continued

S. sonnei. Similarly, 69% of the isolates from residents of Indian reservations were *S. flexneri,* and 31% were *S. sonnei.* This contrasts with the remainder of *Shigella* cases with known residence in which *S. sonnei* represented 75% of isolates and *S. flexneri* represented 22.5%.

Reported by Statistical Svcs Activity, Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: This report is based on CDC's Shigella Surveillance Activity, a passive, laboratory-based system that receives reports from the 50 states and the District of Columbia. These reports do not distinguish between clinical or sub-clinical infections or between chronic or convalescent carriers.

FIGURE 5. Rate of reported isolates of *Shigella*, by age — United States,* 1981



*Age data unavailable for California.

Epidemiologic Notes and Reports

Disseminated Vaccinia Infection in a College Student — Tennessee

On October 12, 1982, the University of Tennessee Student Health Service notified the Tennessee Department of Public Health that a 19-year-old male undergraduate had been hospitalized that day for disseminated vaccinia infection.

The student was vaccinated for the first time in his life at an Air National Guard meeting in Nashville on October 3, 1982. A primary "take" appeared at the vaccination site on October 5, after his return to the university in Knoxville. On October 9, multiple pustules developed on

Vaccinia Infection – Continued

his face. On October 12, the patient's right upper arm was swollen and erythematous, with a 2-3 cm vaccinial lesion and exquisitely tender right axillary nodes. He had numerous confluent facial lesions compatible with vaccinia on both cheeks in areas of active acne. He also had anterior cervical and submandibular lymphadenopathy. The patient appeared acutely ill with chills and a temperature of 38.7 C (101.7 F). Laboratory studies were unremarkable. Vaccinia immune globulin (VIG) was obtained from CDC, and 25 ml, half the indicated dose, was administered intramuscularly that evening. By morning, the patient appeared much improved, he was afebrile, and axillary tenderness was markedly decreased. No additional VIG was given. The patient continued to improve over the next 5 days and returned to class on October 18. No secondary cases were identified.

Reported by J Sweet, MD, L Bushkell, MD, University of Tennessee Health Svc; RH Hutcheson, Jr, MD, State Epidemiologist, Tennessee State Dept of Public Health; Field Svcs Div, Epidemiology Program Office, CDC.

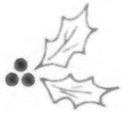
Editorial Note: This student probably inoculated vaccinia virus from the smallpox vaccination site to the acne on his face. Normal skin is rarely infected by vaccinia virus shed from smallpox vaccination. Abnormal skin such as atopic dermatitis is more susceptible to infection by inoculation.

Because of concern about the possible use of variola as a biological weapon, all U.S. military personnel continue to be routinely vaccinated against smallpox. Active duty military personnel and members of the reserves and National Guard are vaccinated on entry into service and every 5 years thereafter. Person-to-person spread of vaccinia from vaccinated military personnel to civilian contacts has been reported in England and Canada (*1*).

Smallpox vaccination of civilians is recommended only for laboratory workers exposed to variola or other orthopox viruses (e.g. monkeypox, vaccinia) (*2*). Even so, smallpox vaccine continues to be misused in attempts to treat illnesses, particularly herpes (both "cold sores" and genital herpes). A case of severe vaccinia necrosum resulting from an attempt to treat genital herpes was recently reported from Michigan (*3*). In November 1982, after three hospitalizations and 7 months of treatment with a wide variety of antiviral agents (including VIG, interferon, Marboran, thiosemicarbazone, thymosin), the Michigan patient still has large, unhealed, vaccinia-positive ulcers at the vaccination site and on the thigh.

References

1. CDC. Vaccinia outbreak—Newfoundland. MMWR 1981;30:453-5.
2. ACIP. Smallpox vaccine. MMWR 1980;29:417-20.
3. CDC. Vaccinia necrosum after smallpox vaccination—Michigan. MMWR 1982;31:501-2.



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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Compendium of Animal Rabies Vaccines, 1983

Prepared by: The National Association of State Public Health Veterinarians, Inc.

Part I: Recommendations for Immunization Procedures

The purpose of these recommendations is to provide information on rabies vaccines to practicing veterinarians, public health officials, and others concerned with rabies control. This document will serve as the basis for animal rabies vaccination programs throughout the United States. Its adoption by cooperating organizations will result in standardization of procedures among jurisdictions, which is necessary for an effective national rabies control program. These recommendations are reviewed and revised as necessary before the beginning of each calendar year. All animal rabies vaccines licensed by the United States Department of Agriculture (USDA) and marketed in the United States are listed in Part II of the Compendium, and Part III describes the principles of rabies control.

A. VACCINE ADMINISTRATION: The Committee recommends that all animal rabies vaccines be restricted to use by or under the supervision of a veterinarian.

B. VACCINE SELECTION: While recognizing the efficacy of vaccines providing one-year duration of immunity, the Committee recommends the use of vaccines providing three-year duration of immunity because their use constitutes the most effective method of increasing the proportion of immunized dogs and cats in comprehensive rabies control programs.

C. ROUTE OF INOCULATION: All rabies vaccines must be administered intramuscularly at one site in the thigh.

D. HIGH-RISK RABIES AREA: An area (town, city, or county) where a high incidence of rabies exists among wildlife or domestic species, as determined by state health officials, may be declared a High Risk Rabies Area. In such areas, the public should be alerted to the risk and urged to make sure that their dogs and cats have current rabies vaccinations. State health officials may wish to consider temporarily altering revaccination schedules.

E. WILDLIFE VACCINATION: The Committee recommends that neither wild nor exotic animals be kept as pets. Since no rabies vaccine is licensed for use in wild animals and since there is no evidence that animal rabies vaccines produce acceptable levels of immunity in wild animals, vaccination is not recommended.

F. ACCIDENTAL HUMAN EXPOSURE TO VACCINE: Accidental human inoculation may occur during administration of animal rabies vaccine. Such exposures to inactivated vaccines constitute **no known** rabies hazard. No cases of human rabies have resulted from needle or other exposure to a licensed modified live virus vaccine in the United States.

G. IDENTIFICATION OF VACCINATED DOGS: The Committee recommends that all government agencies and veterinarians adopt the standard tag system. This will aid the administration of local, state, national, and international procedures. Dog license tags should not conflict in shape and color with rabies tags.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

HE 20.7009:

Animal Rabies – Continued

1. **Rabies Tags:**

Calendar Year	Color	Shape
1983	Green	Bell
1984	Red	Heart
1985	Blue	Rosette
1986	Orange	Fireplug

2. **Rabies Certificate:** Government agencies and veterinarians should use the NASPHV form #50, Rabies Vaccination Certificate, which can be obtained from vaccine manufacturers.

Part II: Vaccines Marketed in United States and NASPHV Recommendations

Vaccine: generic name	Produced by	Product name Marketed by	For use in*	Dosage†	Age at primary vaccination§	Booster recommended
A) MODIFIED LIVE VIRUS						
Canine cell line origin High egg passage	NORDEN License No. 189	ENDURALL-R Norden	Dogs Cats	1 ml 1 ml	3 mos & 1 yr later 3 months	Triennially Annually
Porcine cell line origin High cell passage	WELLCOME (Jensen-Salsbery) License No. 107	ERA STRAIN RABIES VACCINE Wellcome (Jensen-Salsbery)	Dogs Cattle Horses Sheep Goats	1 ml 1 ml 1 ml 1 ml 1 ml	3 mos & 1 yr later 4 months 4 months 4 months 4 months	Triennially Annually Annually Annually Annually
Canine tissue culture origin High cell passage	PHILIPS ROXANE License No. 124	NEUROGEN-TC Bio-Ceutic	Dogs	1 ml	3 mos & 1 yr later	Triennially
Canine tissue culture origin High cell passage	PHILIPS ROXANE License No. 124	UNIRAB Bio-Ceutic	Dogs	1 ml	3 months	Annually
B) INACTIVATED						
Murine origin	ROLYNN License No. 165-B (Prev. No. 266)	TRIMUNE Ft. Dodge	Dogs Cats	1 ml 1 ml	3 mos & 1 yr later 3 months	Triennially Annually
Murine origin	ROLYNN License No. 165-B (Prev. No. 266)	ANNUMUNE Ft. Dodge	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually
Murine origin	DOUGLAS License No. 165-B (Prev. No. 266)	BIORAB-1	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually
Murine origin	DOUGLAS License No. 165-B (Prev. No. 266)	BIORAB-3	Dogs Cats	1 ml 1 ml	3 mos & 1 yr later 3 months	Triennially Annually
Murine origin	WILDLIFE VACCINES, INC. License No. 277	DURA-RAB 1 Wildlife vaccines	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually
Hamster cell line origin	BEECHAM License No. 225	RABCINE Beecham	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually

Part II: Vaccines Marketed in United States and NASPHV Recommendations

Vaccine: generic name	Produced by	Product name Marketed by	For use in*	Dosage†	Age at primary vaccination§	Booster recommended
B) INACTIVATED						
Hamster cell line origin	BEECHAM License No. 225	RABCINE-FELINE Beecham	Cats	1 ml	3 months	Annually
Hamster cell line origin	VACCINES, INC. License No. 227	RABIES VACC. Guardian	Dogs	1 ml	3 months	Annually
Hamster cell line origin	JACKSON License No. 288	RABMUNE Schering	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually
Porcine cell line origin	NORDEN License No. 189	ENDURALL-K Norden	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually
Porcine cell line origin	NORDEN License No. 189	RABGUARD-TC Norden	Dogs Cats	1 ml 1 ml	3 mos & 1 yr later 3 mos & 1 yr later	Triennially Triennially
Monkey cell line origin	WELLCOME License No. 107	CYTORAB Wellcome	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually
Monkey cell line origin	WELLCOME License No. 107	TRIRAB Wellcome	Dogs Cats	1 ml 1 ml	3 mos & 1 yr later 3 months	Triennially Annually
Feline cell line origin	FROMM License No. 195-A	RABVAC Fromm	Dogs Cats	1 ml 1 ml	3 months 3 months	Annually Annually
C) COMBINATION						
Murine origin	DOUGLAS License No. 165-B (266)	PAN-RAB Douglas	Cats	1 ml	3 months	Annually
Feline cell line origin	FROMM License No. 195-A	ECLIPSE III KP-R Fromm	Cats	1 ml	3 months	Annually
Feline cell line origin	FROMM License No. 195-A	ECLIPSE IVKP-R Fromm	Cats	1 ml	3 months	Annually

*Refers only to domestic species of this class of animals.

†All vaccines must be administered intramuscularly at one site in the thigh.

§Three months is the earliest age recommended. Dogs and cats vaccinated between 3 and 12 months should be revaccinated 1 year later.

Part III: Principles of Rabies Control

These guidelines have been prepared by the National Association of State Public Health Veterinarians (NASPHV) for use by government officials, practicing veterinarians, and others who may become involved in certain aspects of rabies control. The NASPHV plans to annually review and revise these recommendations as necessary. Standardized control procedures are needed to effectively deal with the public health aspects of rabies.

A. PRINCIPLES OF RABIES CONTROL

1. **The Disease in Humans:** Rabies in humans can be prevented by eliminating exposure to rabid animals and by prompt local wound treatment and immunization when

Animal Rabies – Continued

exposed. Current recommendations of the Public Health Service Immunization Practices Advisory Committee (ACIP) are suggested for consideration by attending physicians. The recommendations along with the current status of animal rabies in the region and information concerning the availability of rabies biologics are available from state health departments.

2. **Domestic Animals:** Local governments should initiate and maintain effective programs to remove strays and unwanted animals and ensure vaccination of all dogs and cats. Since cat rabies cases now equal the annual incidence in dogs, immunization of cats should be emphasized. Such procedures in the United States have reduced laboratory-confirmed rabies cases in dogs from 8,000 in 1947 to 216 in 1981. The recommended vaccination procedures and the licensed animal vaccines are specified in Parts I and II of the NASPHV's annually released Compendium.
3. **Rabies in Wildlife:** The control of rabies in foxes, skunks, raccoons, and other terrestrial animals is very difficult. Selective reduction of these populations when indicated may be useful, but the utility of this procedure depends heavily on the circumstances surrounding each rabies outbreak.

B. CONTROL METHODS IN DOMESTIC AND CONFINED ANIMALS

1. **Pre-Exposure Vaccination and Management**

Animal rabies vaccines, because of species limitations, techniques, and tolerances, should be administered only by or under the direct supervision of a veterinarian. Within one month after vaccination, a peak rabies antibody titer is reached, and the animal can be considered to be immunized (see Parts I and II of the Compendium for recommended vaccines and procedures).

(Continued on page 693)

TABLE I. Summary–cases of specified notifiable diseases, United States

Disease	51st Week Ending			Cumulative, First 51 Weeks		
	December 25, 1982	December 26, 1981	Median 1977-1981	December 25, 1982	December 26, 1981	Median 1977-1981
Aseptic meningitis	169	93	93	9,040	9,358	7,682
Brucellosis	3	6	6	154	179	179
Encephalitis: Primary (arthropod-borne & unspec.)	22	22	20	1,427	1,500	1,163
Post-infectious	-	1	1	62	79	210
Gonorrhea: Civilian	16,827	14,432	16,880	936,927	978,492	983,104
Military	139	462	424	25,057	27,711	26,230
Hepatitis: Type A	348	453	542	22,300	25,034	28,670
Type B	364	378	366	21,155	20,466	16,131
Non A, Non B	43	N	N	2,335	N	N
Unspecified	162	179	179	8,638	10,691	10,345
Legionellosis	11	N	N	550	N	N
Leprosy	3	2	2	224	238	173
Malaria	6	9	12	1,001	1,324	807
Measles (rubeola)	39	11	134	1,687	2,957	13,449
Meningococcal infections: Total	46	64	60	2,856	3,436	2,542
Civilian	46	64	60	2,843	3,423	2,522
Military	-	-	-	13	13	19
Mumps	57	151	292	5,117	4,721	13,681
Pertussis	58	17	34	1,739	1,225	1,636
Rubella (German measles)	22	37	104	2,263	2,058	11,633
Syphilis (Primary & Secondary): Civilian	470	412	455	32,107	30,435	24,590
Military	-	3	7	427	360	313
Tuberculosis	481	422	582	25,261	26,660	27,210
Tularemia	3	2	2	247	278	190
Typhoid fever	7	14	7	398	573	513
Typhus fever, tick-borne (RMSF)	4	2	5	981	1,181	1,118
Rabies, animal	48	60	60	5,946	6,992	4,875

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	7
Botulism (Mass. 1, Wash. 1)	78	Paralytic	7
Cholera	-	Psittacosis	118
Congenital rubella syndrome (Ariz. 1)	7	Rabies, human	-
Diphtheria	3	Tetanus	79
Leptospirosis (Oreg. 1)	73	Trichinosis (Mass. 1)	84
Plague	18	Typhus fever, flea-borne (endemic, murine) (Tex. 2)	45

TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 25, 1982 and December 26, 1981 (51st week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum 1982
UNITED STATES	169	154	1,427	62	936,927	978,492	348	364	43	162	11	224
NEW ENGLAND	4	3	56	6	22,660	23,710	7	24	-	14	1	2
Maine	-	-	-	-	1,193	1,286	-	-	-	-	-	-
N.H.	-	-	8	-	721	874	-	1	-	1	-	-
Vt.	-	-	-	-	416	422	2	-	-	-	-	-
Mass.	2	-	26	-	10,143	10,087	2	8	-	13	-	-
R.I.	2	-	-	1	1,542	1,469	1	2	-	-	-	-
Conn.	-	3	22	5	8,645	9,572	2	13	-	-	1	2
MID. ATLANTIC	13	3	151	14	119,676	117,308	40	67	2	20	-	31
Upstate N.Y.	7	3	62	3	19,873	20,879	7	17	1	3	-	3
N.Y. City	2	-	21	-	48,939	47,437	17	33	-	7	-	26
N.J.	3	-	24	-	21,815	22,207	4	5	1	5	-	1
Pa.	1	-	44	11	29,049	26,785	12	12	-	5	-	1
E.N. CENTRAL	21	7	355	12	130,427	146,592	34	32	5	13	4	10
Ohio	9	1	140	5	35,376	45,494	11	9	1	5	1	-
Ind.	U	-	95	3	15,738	12,489	U	U	U	U	U	-
Ill.	-	5	18	2	34,829	43,289	16	12	4	3	-	8
Mich.	12	1	73	-	32,597	32,179	7	11	-	5	3	-
Wis.	-	-	29	2	11,887	13,141	-	-	-	-	-	2
W.N. CENTRAL	7	17	101	4	43,829	46,685	6	6	1	2	-	8
Minn.	U	1	27	1	6,305	7,406	U	U	U	U	U	4
Iowa	-	5	54	1	4,780	5,095	-	1	-	1	-	-
Mo.	2	4	9	-	20,737	21,692	1	1	1	-	-	2
N. Dak.	-	1	-	-	562	594	-	-	-	-	-	-
S. Dak.	-	1	-	1	1,103	1,249	-	-	-	-	-	1
Nebr.	-	2	6	-	2,602	3,459	-	1	-	-	-	1
Kans.	5	3	5	1	7,740	7,190	5	3	-	1	-	-
S. ATLANTIC	31	30	202	9	244,138	241,330	27	90	12	17	4	11
Del.	-	-	-	-	4,089	3,872	-	-	-	1	-	-
Md.	1	-	25	-	30,829	28,797	1	22	1	1	1	4
D.C.	-	-	-	-	14,987	13,596	-	-	-	-	-	-
Va.	2	10	44	1	19,674	21,970	4	10	2	1	2	1
W. Va.	1	-	16	-	2,739	3,505	-	2	-	-	-	-
N.C.	6	-	31	1	38,767	37,015	1	6	-	1	-	-
S.C.	1	2	2	-	23,820	23,378	10	11	3	-	-	-
Ga.	1	4	14	-	48,024	49,812	2	10	1	1	-	1
Fla.	19	14	70	7	61,209	59,385	9	29	5	12	1	5
E.S. CENTRAL	7	14	68	6	81,707	81,730	38	23	1	4	-	-
Ky.	-	-	1	-	10,802	10,228	1	-	-	2	-	-
Tenn.	5	9	31	1	32,100	31,194	13	17	1	1	-	-
Ala.	-	4	18	5	24,401	24,478	21	4	-	1	-	-
Miss.	2	1	18	-	14,404	15,830	3	2	-	-	-	-
W.S. CENTRAL	34	45	226	1	130,523	128,582	69	36	-	52	-	29
Ark.	-	7	21	-	10,323	9,822	2	1	-	7	-	-
La.	2	8	29	-	24,279	22,892	8	13	-	-	-	-
Okla.	5	8	40	-	14,353	14,046	6	2	-	1	-	-
Tex.	27	22	136	1	81,568	81,822	53	20	-	44	-	29
MOUNTAIN	11	3	57	2	31,465	38,693	33	22	5	13	2	2
Mont.	-	2	-	-	1,307	1,409	-	-	-	-	-	-
Idaho	3	1	-	-	1,493	1,704	-	1	-	-	-	1
Wyo.	-	-	1	-	952	1,017	-	-	-	-	-	-
Colo.	6	-	20	1	8,445	10,309	6	5	2	2	1	-
N. Mex.	-	-	1	-	4,328	4,385	7	-	-	-	-	-
Ariz.	2	-	11	-	8,168	11,563	19	15	2	10	1	-
Utah	-	-	19	1	1,559	1,890	1	1	1	1	-	1
Nev.	-	-	5	-	5,213	6,416	-	-	-	-	-	-
PACIFIC	41	32	211	8	132,502	153,862	94	64	17	27	-	131
Wash.	3	1	13	1	11,164	13,015	2	3	2	-	-	15
Oreg.	-	-	4	-	7,702	9,096	4	4	3	-	-	2
Calif.	28	30	176	7	107,683	124,783	87	56	11	26	-	76
Alaska	1	1	12	-	3,397	4,005	-	-	-	1	-	1
Hawaii	9	-	6	-	2,556	2,963	1	1	1	-	-	37
Guam	U	-	-	1	118	117	U	U	U	U	U	1
P.R.	U	-	1	3	2,548	3,202	U	U	U	U	U	3
V.I.	U	-	-	-	247	251	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	388	445	U	U	U	U	U	44

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 25, 1982 and December 26, 1981 (51st week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	6	1,001	39	1,687	2,957	46	2,856	57	5,117	58	22	2,263	2,058
NEW ENGLAND	-	51	-	16	86	2	158	2	195	2	-	19	123
Maine	-	-	-	-	5	-	12	-	43	-	-	-	33
N.H.	-	2	-	3	9	-	20	-	18	-	-	11	54
Vt.	-	-	-	2	3	-	11	-	7	-	-	-	-
Mass.	-	28	-	5	59	1	45	1	84	2	-	2	23
R.I.	-	3	-	-	-	-	16	-	18	-	-	1	-
Conn.	-	18	-	6	10	1	54	1	25	-	-	5	13
MID. ATLANTIC	1	174	-	170	999	11	514	4	343	35	-	109	231
Upstate N.Y.	-	33	-	113	226	4	176	2	99	32	-	53	116
N.Y. City	1	69	-	44	107	3	101	-	47	-	-	36	55
N.J.	-	35	-	6	59	-	104	1	55	1	-	18	47
Pa.	-	37	-	7	607	4	133	1	142	2	-	2	13
E.N. CENTRAL	-	85	5	84	92	4	382	27	2,544	2	11	210	435
Ohio	-	13	-	1	20	3	132	14	1,756	-	-	4	3
Ind.	U	4	U	2	9	U	41	U	46	U	U	29	137
Ill.	-	36	-	24	26	1	98	3	214	2	8	81	123
Mich.	-	26	5	57	34	-	80	10	401	-	3	53	44
Wis.	-	6	-	-	3	-	31	-	127	-	-	43	128
W.N. CENTRAL	-	32	-	49	10	2	144	3	642	-	-	62	83
Minn.	U	5	U	-	3	U	32	U	456	U	U	7	8
Iowa	-	8	-	-	1	-	12	2	63	-	-	-	5
Mo.	-	10	-	2	1	1	43	-	21	-	-	38	2
N. Dak.	-	2	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	11	-	1	-	-	1	-
Nebr.	-	4	-	3	4	-	14	-	1	-	-	-	1
Kans.	-	3	-	44	1	1	26	1	100	-	-	16	67
S. ATLANTIC	2	134	14	240	494	8	590	6	323	1	1	97	152
Del.	-	4	-	-	-	-	1	-	12	-	-	1	2
Md.	-	20	-	4	5	1	44	-	34	-	-	34	1
D.C.	-	4	-	1	1	-	5	-	-	-	-	-	-
Va.	1	41	-	14	18	2	72	2	44	-	-	12	9
W. Va.	-	7	-	3	9	-	10	1	119	-	-	3	23
N.C.	-	8	-	2	3	2	113	1	23	-	-	2	5
S.C.	-	4	-	-	2	-	70	1	18	-	-	1	8
Ga.	1	18	-	-	111	3	115	1	27	1	-	18	39
Fla.	-	28	14	216	345	-	160	-	46	-	1	26	65
E.S. CENTRAL	1	11	3	12	6	3	171	-	67	-	-	49	41
Ky.	-	5	-	1	2	-	25	-	22	-	-	31	27
Tenn.	-	-	-	6	2	2	78	-	25	-	-	2	13
Ala.	-	2	-	2	2	1	55	-	10	-	-	-	1
Miss.	1	4	3	3	-	-	13	-	10	-	-	16	-
W.S. CENTRAL	-	67	1	171	878	7	331	-	262	3	2	129	194
Ark.	-	5	-	-	23	-	16	-	8	-	-	1	7
La.	-	5	1	15	4	-	67	-	6	-	-	1	9
Okla.	-	8	-	30	6	1	33	-	-	1	-	3	3
Tex.	-	49	-	126	845	6	215	-	248	2	2	124	175
MOUNTAIN	2	38	-	28	39	3	121	6	122	12	2	94	97
Mont.	-	1	-	-	-	-	7	1	8	-	1	7	3
Idaho	-	2	-	-	1	-	7	1	5	-	-	7	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	8	12
Colo.	2	19	-	7	11	2	51	2	21	12	-	6	30
N. Mex.	-	3	-	-	9	-	15	-	-	-	-	6	5
Ariz.	-	9	-	17	7	-	21	2	56	-	-	22	22
Utah	-	4	-	3	-	1	13	-	22	-	1	26	10
Nev.	-	-	-	-	10	-	2	-	8	-	-	12	11
PACIFIC	-	409	16	917	353	6	445	9	619	3	6	1,494	702
Wash.	-	24	-	42	3	1	53	-	102	3	-	58	106
Oreg.	-	15	-	24	5	2	84	-	-	-	-	7	53
Calif.	-	362	16	845	338	3	292	9	481	-	6	1,414	527
Alaska	-	1	-	1	-	-	12	-	15	-	-	5	1
Hawaii	-	7	-	5	7	-	4	-	21	-	-	10	15
Guam	U	1	U	6	6	U	2	U	5	U	U	2	3
P.R.	U	4	U	137	306	U	9	U	100	U	U	13	6
V.I.	U	-	U	-	24	U	2	U	3	U	U	2	1
Pac. Trust Terr.	U	-	U	1	1	U	5	U	6	U	U	-	2

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 25, 1982 and December 26, 1981 (51st week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	32,107	30,435	481	25,261	247	7	398	4	981	5,946
NEW ENGLAND	603	586	19	736	7	-	18	-	12	42
Maine	8	5	1	55	-	-	-	-	-	26
N.H.	5	16	-	30	-	-	-	-	1	1
Vt.	7	17	1	12	-	-	2	-	-	2
Mass.	405	373	12	485	7	-	14	-	6	7
R.I.	27	35	-	36	-	-	-	-	2	-
Conn.	151	140	5	138	-	-	2	-	3	6
MID. ATLANTIC	4,339	4,351	79	4,229	7	-	69	-	45	202
Upstate N.Y.	433	439	4	726	7	-	12	-	16	112
N.Y. City	2,558	2,585	24	1,592	-	-	36	-	3	-
N.J.	640	608	24	834	-	-	13	-	14	17
Pa.	708	719	27	1,077	-	-	8	-	12	73
E.N. CENTRAL	1,810	2,333	42	3,742	1	1	38	-	88	590
Ohio	333	319	4	597	-	-	13	-	77	80
Ind.	195	313	U	451	-	U	2	U	2	73
Ill.	902	1,250	31	1,628	-	-	8	-	8	299
Mich.	279	360	7	855	-	1	12	-	-	7
Wis.	101	91	-	211	1	-	3	-	1	131
W.N. CENTRAL	535	664	7	756	40	-	17	-	34	1,180
Minn.	142	186	U	141	-	U	8	U	-	209
Iowa	34	29	-	73	3	-	1	-	4	384
Mo.	281	390	5	369	27	-	5	-	13	122
N. Dak.	7	12	-	15	-	-	-	-	-	97
S. Dak.	2	2	-	33	1	-	-	-	4	101
Nebr.	15	11	2	32	4	-	2	-	2	123
Kans.	54	34	-	93	5	-	1	-	11	144
S. ATLANTIC	8,692	8,031	71	5,256	13	-	48	1	522	1,264
Del.	25	16	2	49	-	-	-	-	-	2
Md.	490	563	15	619	1	-	10	-	50	92
D.C.	472	645	2	248	-	-	-	-	-	-
Va.	599	685	11	595	5	-	4	-	74	707
W. Va.	30	32	2	154	-	-	4	-	8	54
N.C.	712	630	12	787	-	-	3	1	225	65
S.C.	560	557	-	514	6	-	3	-	106	66
Ga.	1,775	1,936	8	856	-	-	3	-	52	210
Fla.	4,029	2,967	19	1,434	1	-	21	-	7	68
E.S. CENTRAL	2,243	1,992	35	2,305	8	2	22	1	98	638
Ky.	133	107	9	604	-	-	4	-	1	132
Tenn.	645	672	7	757	6	1	5	-	59	354
Ala.	835	615	10	618	-	1	10	1	18	145
Miss.	630	598	9	326	2	-	3	-	20	7
W.S. CENTRAL	8,573	7,310	59	3,037	127	3	49	2	162	1,157
Ark.	217	159	5	350	76	1	9	-	22	155
La.	1,834	1,648	26	473	4	-	3	-	2	33
Okla.	185	175	6	338	35	-	3	-	76	189
Tex.	6,337	5,328	22	1,876	12	2	34	2	62	780
MOUNTAIN	810	759	27	714	34	-	14	-	14	280
Mont.	5	11	-	42	4	-	-	-	5	96
Idaho	25	19	-	29	1	-	-	-	4	11
Wyo.	16	18	4	10	5	-	-	-	1	21
Colo.	230	242	11	108	7	-	3	-	1	48
N. Mex.	187	125	4	119	5	-	-	-	1	23
Ariz.	215	182	8	298	-	-	8	-	-	59
Utah	24	30	-	43	12	-	2	-	-	18
Nev.	108	132	-	65	-	-	1	-	2	4
PACIFIC	4,502	4,409	142	4,486	10	1	123	-	6	593
Wash.	160	192	10	286	1	1	10	-	-	8
Oreg.	113	117	-	191	2	-	4	-	1	5
Calif.	4,108	4,013	131	3,667	6	-	105	-	5	493
Alaska	15	14	-	89	1	-	1	-	-	87
Hawaii	108	73	1	253	-	-	3	-	-	-
Guam	1	-	U	39	-	U	-	U	-	-
P.R.	784	636	U	454	-	U	3	U	-	50
V.I.	27	18	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	114	-	U	1	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending December 25, 1982 (51st week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	567	363	147	33	11	13	34
Boston, Mass	166	100	40	14	3	9	19
Bridgeport, Conn	48	32	13	3	-	-	4
Cambridge, Mass	25	22	2	1	-	-	-
Fall River, Mass	25	16	9	-	-	-	-
Hartford, Conn	39	27	9	1	1	1	1
Lowell, Mass	26	19	7	-	-	-	1
Lynn, Mass	16	10	4	-	2	-	-
New Bedford, Mass	25	17	6	1	1	-	-
New Haven, Conn	32	16	10	5	1	-	-
Providence, R I	46	25	15	4	1	1	2
Somerville, Mass	14	13	1	-	-	-	-
Springfield, Mass	40	26	9	3	1	1	2
Waterbury, Conn	19	15	4	-	-	-	1
Worcester, Mass	46	25	18	1	1	1	4
MID ATLANTIC	2,694	1,610	601	154	75	54	115
Albany, N Y	63	42	13	3	3	2	-
Allentown, Pa §	19	19	-	-	-	-	-
Buffalo, N Y	119	75	35	5	2	2	9
Camden, N J	35	27	5	2	-	1	-
Elizabeth, N J	35	26	7	2	-	-	-
Erie, Pa †	49	39	9	1	-	-	1
Jersey City, N J	34	24	6	-	2	2	1
N Y City, N Y	1,527	1,018	334	96	43	36	53
Newark, N J	66	41	15	8	1	1	4
Paterson, N J	28	17	7	-	3	1	3
Philadelphia, Pa †	325	208	89	22	2	4	26
Pittsburgh, Pa †	69	44	18	2	4	1	5
Reading, Pa	22	17	4	-	1	-	2
Rochester, N Y	118	80	21	5	9	3	7
Schenectady, N Y	19	16	1	-	2	-	1
Scranton, Pa †	25	20	3	2	-	-	1
Syracuse, N Y	54	33	17	2	2	-	-
Trenton, N J	40	27	10	1	1	1	-
Utica, N Y	21	16	4	1	-	-	2
Yonkers, N Y	26	21	3	2	-	-	-
E N CENTRAL	2,048	1,390	413	106	55	80	58
Akron, Ohio	70	49	16	3	1	1	1
Canton, Ohio	25	19	6	-	-	-	1
Chicago, Ill	483	279	125	35	19	25	8
Cincinnati, Ohio	137	95	30	6	6	-	9
Cleveland, Ohio	134	79	40	7	3	5	2
Columbus, Ohio	136	85	32	10	2	7	8
Dayton, Ohio	86	54	19	6	2	5	2
Detroit, Mich §	258	234	1	6	6	7	5
Evansville, Ind	32	24	6	1	1	-	1
Fort Wayne, Ind	46	31	9	2	3	1	3
Gary, Ind	25	12	9	2	1	1	1
Grand Rapids, Mich	69	50	12	5	-	2	3
Indianapolis, Ind	161	92	48	5	5	11	3
Madison, Wis	33	21	7	2	1	2	-
Milwaukee, Wis	124	95	17	3	3	6	2
Peoria, Ill	34	28	3	1	-	2	5
Rockford, Ill	29	22	6	1	-	-	2
South Bend, Ind	37	22	10	4	1	-	-
Toledo, Ohio	88	69	10	3	1	5	2
Youngstown, Ohio	41	30	7	4	-	-	-
W N CENTRAL	672	451	157	29	19	16	29
Des Moines, Iowa	54	33	16	4	1	-	10
Duluth, Minn	6	4	2	-	-	-	1
Kansas City, Kans	35	23	9	2	-	1	-
Kansas City, Mo	119	79	32	4	3	1	4
Lincoln, Nebr	29	21	4	2	-	2	-
Minneapolis, Minn	86	59	16	4	3	5	2
Omaha, Nebr	72	35	28	2	3	4	6
St Louis, Mo	161	120	24	8	7	2	4
St Paul, Minn	53	39	12	2	-	-	-
Wichita, Kans	57	38	15	1	2	1	2
S ATLANTIC	1,235	744	319	98	44	30	48
Atlanta, Ga	149	88	36	18	5	2	6
Baltimore, Md	337	204	96	23	8	6	11
Charlotte, N C	57	29	15	6	4	3	2
Jacksonville, Fla	64	44	13	4	2	1	2
Miami, Fla	100	59	30	7	4	-	-
Norfolk, Va	42	24	9	2	4	3	4
Richmond, Va	82	52	22	4	2	2	10
Savannah, Ga	34	22	8	2	1	1	3
St Petersburg, Fla	71	59	8	1	2	1	2
Tampa, Fla	62	36	10	5	4	7	4
Washington, D C	169	92	51	19	4	3	2
Wilmington, Del	68	35	21	7	4	1	2
E S CENTRAL	543	354	127	24	15	23	28
Birmingham, Ala	106	72	20	5	3	6	4
Chattanooga, Tenn	48	33	11	1	2	1	3
Knoxville, Tenn	18	14	2	1	1	-	2
Louisville, Ky	100	70	22	4	2	2	9
Memphis, Tenn	106	61	28	3	-	14	5
Mobile, Ala	33	24	7	2	-	-	1
Montgomery, Ala	21	16	3	2	-	-	1
Nashville, Tenn	111	64	34	6	7	-	3
W S CENTRAL	1,097	633	296	91	42	35	35
Austin, Tex	46	32	10	-	2	2	3
Baton Rouge, La	41	23	11	6	-	1	1
Corpus Christi, Tex	51	33	13	4	-	1	-
Dallas, Tex	208	117	52	18	10	11	3
El Paso, Tex	39	28	8	2	-	1	2
Fort Worth, Tex	79	47	15	7	5	5	3
Houston, Tex	200	86	72	24	13	5	6
Little Rock, Ark	39	24	10	2	-	3	3
New Orleans, La	145	82	40	13	7	3	-
San Antonio, Tex	151	96	38	12	3	2	10
Shreveport, La	28	20	5	2	1	-	-
Tulsa, Okla	70	45	22	1	1	1	4
MOUNTAIN	512	314	115	29	19	35	25
Albuquerque, N Mex	37	28	7	-	1	1	3
Colo Springs, Colo	32	19	8	4	1	-	4
Denver, Colo	103	48	26	9	1	19	5
Las Vegas, Nev	71	44	14	3	5	5	4
Ogden, Utah	15	12	3	-	-	-	2
Phoenix, Ariz	116	73	27	6	6	4	2
Pueblo, Colo	24	16	3	3	1	1	1
Salt Lake City, Utah	47	25	13	2	3	4	-
Tucson, Ariz	67	49	14	2	1	1	4
PACIFIC	1,831	1,245	389	100	40	55	82
Berkeley, Calif	21	15	6	-	-	-	-
Fresno, Calif	98	76	14	5	-	3	4
Glendale, Calif	22	14	6	-	-	2	1
Honolulu, Hawaii	65	41	19	4	1	-	4
Long Beach, Calif	104	74	25	2	-	3	6
Los Angeles, Calif	567	370	124	41	20	11	18
Oakland, Calif §	62	58	1	-	1	1	2
Pasadena, Calif	29	22	4	-	-	3	-
Portland, Oreg	108	72	23	5	-	6	7
Sacramento, Calif §	70	64	1	2	-	3	3
San Diego, Calif	92	59	24	5	1	3	8
San Francisco, Calif	185	109	45	15	5	11	2
San Jose, Calif	164	105	46	6	5	2	14
Seattle, Wash	149	101	33	6	5	4	4
Spokane, Wash	62	39	14	4	2	3	4
Tacoma, Wash	35	26	4	5	-	-	5
TOTAL	11,199††	7,304	2,564	664	320	341	454

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages

§ Data not available. Figures are estimates based on average of past 4 weeks.

Animal Rabies – Continued

(a) **Dogs and Cats**

All dogs and cats should be vaccinated against rabies commencing at 3 months of age and revaccinated in accordance with Part II of this Compendium.

(b) **Livestock**

It is not economically feasible, nor is it justified from a public health standpoint, to vaccinate all livestock against rabies. Veterinary clinicians and owners of valuable animals may consider immunizing certain breeding stock located in areas where wildlife rabies is epizootic.

(c) **Other Animals**

(1) **Animals Maintained in Exhibits and in Zoological Parks**

Captive animals not completely excluded from all contact with local vectors of rabies can become infected with rabies. Moreover, such animals may be incubating rabies when captured. Exhibit animals, especially those carnivores and omnivores having contact with the viewing public, should be quarantined for a minimum of 180 days. Since no rabies vaccine is licensed for use in wild animals, vaccination even with inactivated vaccine is not recommended. Pre-exposure rabies immunization of animal workers at such facilities is recommended and reduces the need for euthanasia of valuable animals for rabies testing after they have bitten a handler.

(2) **Wild Animals**

Because of the existing risk of rabies among wild animals such as raccoons, skunks, and foxes, the American Veterinary Medical Association (AVMA), the NASPHV, and the Conference of State and Territorial Epidemiologists strongly recommend the enactment of state laws prohibiting the interstate and intrastate importation, distribution, and relocation of wild animals. Further, these same organizations continue to recommend the enactment of laws prohibiting the distribution and/or ownership of wild animals as pets.

2. **Stray Animal Control**

Stray animals should be removed from the community, especially in rabies epizootic areas. Local health department and dog control officials can enforce the pick-up of strays more efficiently if owned animals are confined or leashed when not confined. Strays should be impounded for at least 3 days to give owners sufficient time to reclaim animals apprehended as strays.

3. **Quarantine**

(a) **International**: Present USDA regulations (CFR No. 71154) governing the importation of wild and domesticated felines, canines, and other potential vectors of rabies are minimal for preventing the introduction of rabid animals into the United States. All dogs and cats imported from countries with endemic rabies should be vaccinated against rabies at least 30 days before entry into the United States. The Centers for Disease Control (CDC) is responsible for these animals imported into the United States. CDC's requirements should be coordinated with interstate shipment requirements. The health authority of the state of destination should be notified within 72 hours of any animal conditionally admitted into its jurisdiction.

The conditional admission of such animals into the United States must be subject to state and local laws governing rabies. Failures to comply with these requirements should be promptly reported to the director of CDC.

(b) **Interstate**: Before interstate shipment, dogs and cats should be vaccinated against rabies according to the Compendium's recommendations and preferably shall be vaccinated at least 30 days before shipment. While in shipment, they should be accompanied by a currently valid NASPHV Form #50, Rabies Vaccination Certificate.

Animal Rabies — Continued

One copy of the certificate should be mailed to the appropriate public health veterinarian or state veterinarian of the state of destination.

(c) **Health Certificates**: If a certificate is required for dogs and cats in transit, it must not replace the NASPHV rabies vaccination certificate.

4. **Adjunct Procedures**

Methods or procedures that enhance rabies control include:

(a) **Licensure**: Registration or licensure of all dogs and cats may be used as a means of rabies control by controlling the stray animal population. Frequently, a fee is charged for such licensure and revenues collected are used to maintain a rabies or animal control program. Vaccination is usually recommended as a prerequisite to licensure.

(b) **Canvassing of Area**: This includes house-to-house calls by members of the animal control program to enforce vaccination and licensure requirements.

(c) **Citations**: These are legal summonses issued to owners for violations including the failure to vaccinate or license their animals.

(d) **Leash Laws**: All communities should adopt leash laws that can be incorporated in their animal control ordinances.

5. **Post-Exposure Management**

ANY DOMESTIC ANIMAL THAT IS BITTEN OR SCRATCHED BY A BAT OR BY A WILD, CARNIVOROUS MAMMAL THAT IS NOT AVAILABLE FOR TESTING SHOULD BE REGARDED AS HAVING BEEN EXPOSED TO A RABID ANIMAL.

(a) When bitten by a rabid animal, unvaccinated dogs and cats should be destroyed immediately. If the owner is unwilling to have this done, the unvaccinated animal should be placed in strict isolation for 6 months and vaccinated one month before being released. Dogs and cats that are currently vaccinated should be revaccinated immediately, leashed, and confined for 90 days.

(b) **Livestock**: All species of livestock are susceptible to rabies infection; cattle appear to be among the most susceptible of all domestic animal species. Livestock known to have been bitten by rabid animals should be destroyed (slaughtered) immediately. If the owner is unwilling to have this done, the animal should be kept under very close observation for 6 months.

Regarding the management of livestock exposed to rabid animals, the following recommendations and considerations are suggested:

(1) If slaughtered within 7 days of being bitten, tissues may be eaten without risk of infection, provided liberal portions of the exposed area are discarded. Federal meat inspectors will reject for slaughter any animal that has been exposed to rabies within 8 months.

(2) No tissues or secretions from a clinically rabid animal should be used for human or animal consumption. However, because pasteurization temperatures will inactivate rabies virus, the drinking of pasteurized milk or eating of completely cooked meat does not constitute a rabies exposure.

C. CONTROL METHODS IN WILD ANIMALS

1. **Terrestrial Mammals**

Since there is no evidence that these costly programs reduce either wildlife reservoirs or rabies incidence on a statewide basis, persistent, continuous, and routine trapping or poisoning campaigns as a means of wildlife rabies control should be abolished. However, limited control in high-contact areas (picnic grounds, camps, suburban areas) may be indicated for the removal of selected high-risk species of wild animals. The public should be warned not to handle wild animals. The state game department should be consulted early to manage any elimination programs when requested to do so by the state health department.

Animal Rabies – Continued

2. **Bats**

   (a) Rabid bats have been reported from every state except Hawaii and have caused human rabies infections in the United States. It is neither feasible nor practical, however, to control rabies in bats by areawide bat population reduction programs.

   (b) Bats should be eliminated from houses and surrounding structures to prevent direct association with people. Such structures should then be made bat-proof by sealing routes of entrance with screen or other means.

   (c) A person bitten by a bat or any wild animal should immediately report the incident to a physician or hospital emergency room, which will evaluate the need for antirabies treatment (see current Rabies Prophylaxis Recommendation of the Public Health Service Immunization Practices Advisory Committee, *MMWR* 1982;31:279-80, 285). Bats and wild carnivorous mammals that bite people should be killed and sent to a laboratory for examination for rabies.

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ENDORSED BY: Conference of State and Territorial Epidemiologists, AVMA, Council on Public Health and Regulatory Veterinary Medicine

Public Health Impact of a Snow Disaster

The severe blizzard that struck Colorado on December 24 and 25, 1982, has raised questions about the public health impact of a snow disaster. Epidemiologic studies of a similar storm in New England in February 1978 may help officials facing similar conditions (*1-4*).

Major findings of the 1978 studies follow: 1) Although total mortality did not increase significantly during the blizzard in eastern Massachusetts, a third (27) of all deaths were classed as storm related. Eight persons stranded in cars died, five from carbon monoxide intoxication. 2) Total mortality and mortality from ischemic heart disease increased significantly in Rhode Island. 3) The number of emergency room visits declined 64% in Rhode Island and 56% in eastern Massachusetts during the blizzard but returned to normal in a few days. 4) Hospitals in Massachusetts had supply problems because delays in discharging patients raised occupancy rates to capacity. 5) No disease outbreaks and no water or sanitation hazards could be verified in eastern Massachusetts although seven were reported.

Based on this and other information, officials should consider the following recommendations during blizzards: 1) Early in the storm, warn against non-essential driving. 2) Announce publicly that persons who must drive should have extra clothes and food with them and remain in their vehicle if stranded. Advise extreme caution if the heating system is used, even for short periods, while the vehicle is stopped. Exhaust systems may become blocked with snow, and ventilation adequacy is hard to determine. 3) Establish a rumor clearinghouse to investigate reported disease outbreaks and environmental health hazards. 4) Rapidly investigate storm-related deaths to dispel rumors and gain data. 5) Advise hospitals that anticipate overcrowding and supply shortages to discharge and transport patients home early, using emergency vehicles if necessary.

Reported by Field Svcs Div, Epidemiology Program Office, Special Studies Br, Chronic Diseases Div, Center for Environmental Health, CDC

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Snow Disaster – Continued

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Influenza Update — United States

Since November 30, 1982, increasing influenza activity has been reported, including two nursing home outbreaks in upstate New York—one November 30-December 16 and one beginning December 18. In a Monroe County nursing home, about 63 (26%) of 240 residents experienced influenza-like illness, and six of 12 respiratory specimens collected grew influenza A(H3N2) virus. Preliminary laboratory results from the second outbreak also suggest an association with influenza virus; morbidity data are pending. Overall influenza-like illness in the region is not unusually elevated. In Idaho and Montana, however, several reports indicate increased influenza activity since December 20. In one small community, for example, school absenteeism (about 20%) caused premature closing before the winter vacation, and in several areas of the state physicians reported increased office visits, emergency room visits, or hospital admissions from influenza-like illness. An outbreak of influenza-like illness in an Idaho nursing home has also been reported. Although laboratory diagnosis is pending in Idaho, eight influenza A(H3N2) viruses have been isolated in Montana, including several from children with acute respiratory illness. In Arizona, Georgia, Hawaii, and Utah, sporadic cases of influenza have been confirmed by isolation of type A(H3N2) strains.

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CENTERS FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Immunodeficiency among Female Sexual Partners of Males with Acquired Immune Deficiency Syndrome (AIDS) — New York

CDC has received reports of two females with cellular immunodeficiency who have been steady sexual partners of males with the acquired immune deficiency syndrome (AIDS).

Case 1: A 37-year-old black female began losing weight and developed malaise in June 1982. In July, she had oral candidiasis and generalized lymphadenopathy and then developed fever, non-productive cough, and diffuse intestitial pulmonary infiltrates. A transbronchial biopsy revealed *Pneumocystis carinii* pneumonia (PCP). Immunologic studies showed elevated immunoglobulin levels, lymphopenia, and an undetectable number of T-helper cells. She responded to antimicrobial therapy, but 3 months after hospital discharge had lymphadenopathy, oral candidiasis, and persistent depletion of T-helper cells.

The patient had no previous illnesses or therapy associated with immunosuppression. She admitted to moderate alcohol consumption, but denied intravenous (IV) drug abuse. Since 1976, she had lived with and had been the steady sexual partner of a male with a history of IV drug abuse. He developed oral candidiasis in March 1982 and in June had PCP. He had laboratory evidence of immune dysfunction typical of AIDS and died in November 1982.

Case 2: A 23-year-old Hispanic female was well until February 1982 when she developed generalized lymphadenopathy. Immunologic studies showed elevated immunoglobulin levels, lymphopenia, decreased T-helper cell numbers, and a depressed T-helper/T-suppressor cell ratio (0.82). Common infectious causes of lymphadenopathy were excluded by serologic testing. A lymph node biopsy showed lymphoid hyperplasia. The lymphadenopathy has persisted for almost a year; no etiology for it has been found.

The patient had no previous illnesses or therapy associated with immunosuppression and denied IV drug abuse. Since the summer of 1981, her only sexual partner has been a bisexual male who denied IV drug abuse. He developed malaise, weight loss and lymphadenopathy in June 1981 and oral candidiasis and PCP in June 1982. Skin lesions, present for 6 months, were biopsied in June 1982 and diagnosed as Kaposi's sarcoma. He has laboratory evidence of immune dysfunction typical of AIDS and remains alive.

Reported by C Harris, MD, C Butkus Small, MD, G Friedland, MD, R Klein, MD, B Moll, PhD, E Emeson, MD, I Spigland, MD, N Steigbigel, MD, Depts of Medicine and Pathology, Montefiore Medical Center, North Central Bronx Hospital, and Albert Einstein College of Medicine, R Reiss, S Friedman, MD, New York City Dept of Health, R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; AIDS Activity, Center for Infectious Diseases, CDC.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

HE 20.7009:

Immunodeficiency – Continued

Editorial Note: Each reported female patient developed immunodeficiency during a close relationship, including repeated sexual contact, with a male who had AIDS. Patient 1 fits the CDC case definition of AIDS used for epidemiologic surveillance (*1*). Patient 2 does not meet this definition, but her persistent, generalized lymphadenopathy and cellular immunodeficiency suggest a syndrome described among homosexual men (*2*). The epidemiologic and immunologic features of this "lymphadenopathy syndrome" and the progression of some patients with this syndrome to Kaposi's sarcoma and opportunistic infections suggest it is part of the AIDS spectrum (*3,4*). Other than their relationships with their male sexual partners, neither patient had any apparent risk factor for AIDS. Both females specifically denied IV drug abuse.

Epidemiologic observations increasingly suggest that AIDS is caused by an infectious agent. The description of a cluster of sexually related AIDS patients among homosexual males in southern California suggested that such an agent could be transmitted sexually or through other intimate contact (*5*). AIDS has also been reported in both members of a male homosexual couple in Denmark (*6*). The present report supports the infectious-agent hypothesis and the possibility that transmission of the putative "AIDS agent" may occur among both heterosexual and male homosexual couples.

Since June 1981, CDC has received reports of 43 previously healthy females who have developed PCP or other opportunistic infections typical of AIDS. Of these 43 patients, 13 were reported as neither Haitians nor IV drug abusers. One of these 13 females is described in case 1; another four, including two wives, are reported to be steady sexual partners of male IV drug abusers. Although none of the four male partners has had an overt illness suggesting AIDS, immunologic studies of blood specimens from one of these males have shown abnormalities of lymphoproliferative response (*7*). Conceivably, these male drug abusers are carriers of an infectious agent that has not made them ill but caused AIDS in their infected female sexual partners.

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Formaldehyde Exposures in a Gross Anatomy Laboratory — Colorado

A recent study by the National Institute for Occupational Safety and Health (NIOSH) found significant exposures to formaldehyde in a gross anatomy laboratory at a medical school in Colorado (*1*).

In early December 1981, at the request of medical and dental students at the university, *Formaldehyde Exposures – Continued*

NIOSH investigators conducted an environmental evaluation of the anatomy laboratory and a medical evaluation of the students using it. They collected 55 personal breathing-zone air samples from students dissecting cadavers (25 for determination of formaldehyde exposure and 30 for determination of phenol exposure). In addition, they performed pulmonary function tests on 23 students.

Results of the environmental sampling showed formaldehyde levels ranging from less than 0.02 mg/M^3 to 3.3 mg/M^3 (0.02 parts per million [ppm] to 2.7 ppm), indicating exposures sufficient to cause symptoms of irritation in most of the exposed students. Phenol levels ranged from less than 0.01 mg/M^3 to 12.2 mg/M^3, all within the NIOSH-recommended maximum occupational exposure level of 19.0 mg/M^3 (*2*).

Pulmonary function tests on the 23 students were normal. However, one student, tested after exposure, showed clinically significant decreases of 13.0% in forced vital capacity and 10.7% in forced expiratory volume in 1 second. This student had a history of adverse reactions to formaldehyde, presumably an allergic basis for these findings. Eleven other students who participated in post-exposure pulmonary function tests showed no significant decreases in pulmonary function.

Reported by the Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: The sharp odor of formaldehyde can be detected at very low levels (less than 1 ppm). Exposure to concentrations ranging from 0.1 to 5.0 ppm can cause burning of the eyes, tearing, and general irritation to the upper respiratory passages. Low levels (0.3-2.7 ppm) have also been found to disturb sleep and to be irritating to some persons (*3*). Higher levels (10-20 ppm) may produce coughing, tightening in the chest, a sense of pressure in the head, and palpitations (*4-6*). Exposures of 50-100 ppm and above can cause serious injury, including pulmonary edema, pneumonitis, or death (*7*).

Dermatitis due to formaldehyde solutions or formaldehyde-containing resins is a well-recognized problem (*8*). After a few days of exposure, a sudden inflammatory skin reaction may develop on the eyelids, face, neck, scrotum, and flexor surfaces of the arms. Other surfaces of the body may also be involved, sometimes after years of repeated exposure.

Formaldehyde has been shown to induce a rare form of nasal cancer in both Fischer 344 rats and B6C3F1 mice (*9*) and may induce the same type of cancer in Sprague-Dawley rats. Although humans and animals may differ in their susceptibility to specific chemical compounds, any substance producing cancer in experimental animals, particularly in more than one species, should be viewed as a potential cancer-causing agent in humans. Formaldehyde has also demonstrated mutagenic activity in several test systems.

NIOSH recommends that formaldehyde be handled in the workplace as a potential occupational carcinogen (*3*). Safe levels of exposure to carcinogens have not been demonstrated, but decreasing exposure should reduce the possibility of developing cancer. The extent of cancer risk from exposure to formaldehyde levels at or below the current Occupational Safety and Health Administration (OSHA) standard of 3 ppm (*10*) has not yet been determined. As a prudent public health measure, NIOSH recommends that engineering controls and stringent work practices reduce occupational exposure to the lowest possible levels.

To minimize formaldehyde exposure in gross anatomy laboratories, NIOSH recommends the following:

1. Students and instructors should be aware of the potential health hazards of formaldehyde.
2. Persons handling formalin or preparing dilute formalin solutions should wear protective equipment, including rubber gloves, protective aprons, and eye and face protection.
3. Ventilation should provide a minimum of five air changes per hour to help lower formaldehyde concentrations.

Formaldehyde Exposures – Continued

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Acquired Immune Deficiency Syndrome (AIDS) in Prison Inmates — New York, New Jersey

CDC has received reports from New York and New Jersey of 16 prison inmates with the acquired immune deficiency syndrome (AIDS).

New York: Between November 1981 and October 1982, ten AIDS cases (nine with *Pneumocystis carinii* pneumonia [PCP] and one with Kaposi's sarcoma [KS]) were reported among inmates of New York State correctional facilities. The patients had been imprisoned from 3 to 36 months (mean 18.5 months) before developing symptoms of these two diseases.

All ten patients were males ranging in age from 23 to 38 years (mean 29.7 years). Four were black, and of the six who were white, two were Hispanic. Four of the nine patients with PCP died; the patient with KS is alive. All nine patients with PCP also developed oral candidiasis. None of the patients was known to have an underlying illness associated with immunosuppression, and no such illness was found at postmortem examination of the four patients who died. PCP was diagnosed in all nine cases by means of transbronchial or open-lung biopsy, while KS was diagnosed by biopsy of a lesion on the leg.

Evidence of cellular immune dysfunction was present in the nine patients with PCP: eight were lymphopenic, and all nine were anergic to multiple cutaneous recall antigens. An abnormally low ratio of T-helper to T-suppressor cells was present in six of seven patients tested, and in vitro lymphocyte proliferative responses to a variety of mitogens and antigens were significantly depressed or negative in the six patients tested. The one patient with KS had cutaneous anergy and a decreased proportion of T-cells in his peripheral blood. The ratio of T-helper to T-suppressor cells was normal; studies of lymphoproliferative response were not done.

All ten patients reported that they were heterosexual before imprisonment; one is known to have had homosexual contacts since confinement. However, the nine patients with PCP were regular users of intravenous (IV) drugs (principally heroin and cocaine) in New York City before imprisonment. The seven patients who were extensively interviewed denied regular IV drug use since confinement, although two reported occasional use of IV drugs while in prison. The ten patients were housed in seven different prisons when they first developed PCP or KS. Three patients who developed symptoms of PCP within 1 month of each other were confined in the same facility. However, they were housed in separate buildings, and each denied any social interaction (including homosexual contact and drug use) with the other patients.

All inmates of the New York State correctional system receive a medical evaluation when transferred from local or county jails; this usually includes a leukocyte count. Of the nine AIDS patients who initially had leukocyte counts, seven did not then have symptoms of AIDS. Four of these seven asymptomatic males had leukocyte counts below 4000/mm^3. For these four, the time between leukocyte counts and development of clinical PCP symptoms ranged from 4 to 19 months (mean 11.5 months).

New Jersey: Of the 48 AIDS cases reported from New Jersey since June 1981, six have involved inmates of New Jersey State correctional facilities. All six had PCP. They were imprisoned from 1 to 36 months (mean 17.5 months) before onset of symptoms.

All six patients were males ranging in age from 26 to 41 years (mean 32 years). Three were black; three, white. Four of the six died within 1-8 months of onset of their illnesses. None of the six was known to have underlying illness associated with immune deficiency. Immunologic studies of the two survivors have shown cutaneous anergy, leukopenia, lymphopenia, and increased circulating immune complexes. T-cell studies were not done.

All six patients have histories of chronic IV drug abuse. Of the five for whom sexual orientation was reported, four were heterosexual, and one was homosexual. The two living patients have denied both IV drug use and homosexual activity since imprisonment. No two of the six patients had been confined in the same facility at the same time.

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Editorial Note: Since male homosexuals and IV drug abusers are known to be at increased risk for AIDS (*1*), the occurrence of AIDS among imprisoned members of these groups might have been anticipated. Increasingly, epidemiologic observations suggest that AIDS is caused by an infectious agent transmitted sexually or through exposure to blood or blood products. Because of the difficulties inherent in interviewing prisoners, data elicited in such interviews must be viewed cautiously. Given this caution, the histories obtained from the inmates indicate that all or most of their drug use, and, by inference, their exposure to a blood-borne agent, occurred before confinement.

The presence of leukopenia in some of the prisoners tested on admission to the prison system may imply that laboratory evidence of immune dysfunction may precede clinical illness by months.

Health care personnel for correctional facilities should be aware of the occurrence of AIDS in prisoners, particularly prisoners with histories of IV drug abuse. AIDS cases identified in prisoners should be reported to local and state correctional and health departments and to CDC.

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Update: Influenza — United States

Since mid-December 1982, influenza outbreaks have been confirmed by virus isolation in Michigan and Minnesota. At a nursing home in Genesee County, Michigan, 19 (11%) of 167 residents have experienced influenza-like illness since December 13, and three type A(H3N2) viruses have been isolated from four respiratory specimens. In Crawford County, Michigan, 26% and 21% absenteeism rates associated with influenza-like illness have been reported in an elementary school and a high school, respectively; five type A(H3N2) viruses have been isolated.

A virus isolate in Minnesota was recovered from a 2-year-old child in a Hennepin County day-care center, where about 40% of the approximately 100 children have experienced influenza-like illness since December 6. Several central Minnesota schools reported increased absenteeism due to influenza-like illness just before the winter vacation.

Since October, influenza type A(H3N2) viruses have been isolated in 15 states (Alaska, Arizona, Georgia, Hawaii, Michigan, Minnesota, Montana, New York, Oregon, Pennsylvania, Tennessee, Texas, Utah, Virginia, and Washington) and outbreaks or community spread reported in five states (Alaska, Michigan, Minnesota, Montana, and New York). Through the end of 1982, pneumonia and influenza deaths reported from 121 cities indicated no significant elevation. All virus isolates submitted to CDC for characterization have been influenza type A(H3N2) closely related to A/Bangkok/1/79 (H3N2).

(Continued on page 707)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	52nd Week Ending			Cumulative, First 52 Weeks		
	January 1, 1983	January 2, 1982	Median 1977-1981	January 1, 1983	January 2, 1982	Median 1977-1981
Aseptic meningitis	115	163	120	9,156	9,521	7,774
Brucellosis	-	5	5	154	184	184
Encephalitis: Primary (arthropod-borne & unspec.)	18	40	23	1,448	1,540	1,185
Post-infectious	-	1	4	63	80	214
Gonorrhea: Civilian	11,872	13,954	18,944	949,237	992,446	1,000,256
Military	343	550	294	25,400	28,261	26,477
Hepatitis: Type A	345	727	744	22,652	25,761	29,450
Type B	358	652	356	21,532	21,118	16,454
Non A, Non B	58	N	N	2,395	N	N
Unspecified	150	284	255	8,777	10,975	10,666
Legionellosis	7	N	N	556	N	N
Leprosy	7	15	5	231	253	178
Malaria	8	38	18	1,008	1,380	849
Measles (rubeola)	8	55	151	1,697	3,012	13,600
Meningococcal infections: Total	52	114	80	2,913	3,550	2,622
Civilian	52	113	79	2,900	3,536	2,602
Military	-	1	1	13	14	19
Mumps	74	249	249	5,196	4,970	13,920
Pertussis	36	28	32	1,784	1,253	1,660
Rubella (German measles)	16	25	47	2,283	2,083	11,680
Syphilis (Primary & Secondary): Civilian	413	441	415	32,553	30,876	25,114
Military	4	1	4	431	361	319
Tuberculosis	456	865	846	25,728	27,525	28,058
Tularemia	7	11	6	254	289	196
Typhoid fever	5	10	7	400	583	517
Typhus fever, tick-borne (RMSF)	3	11	11	979	1,192	1,131
Rabies, animal	106	85	71	6,066	7,077	4,378

TABLE II. Notifiable diseases of low frequency, United States

	Cum 1982		Cum 1982
Anthrax	-	Poliomyelitis: Total	7
Botulism	78	Paralytic	7
Cholera	-	Psittacosis (Idaho 1, Wash. 1)	120
Congenital rubella syndrome	7	Rabies, human	-
Diphtheria	3	Tetanus (La. 1, Tex. 1)	81
Leptospirosis	73	Trichinosis (Vt. 3, Idaho 1, Calif. 1)	90
Plague	18	Typhus fever, flea-borne (endemic, murine)	45

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 1, 1983 and January 2, 1982 (52nd week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	115	154	1,448	63	949,237	992,446	345	358	58	150	7	231
NEW ENGLAND	5	3	56	6	23,152	24,027	8	15	1	10	1	2
Maine	-	-	-	-	1,224	1,308	-	1	-	-	-	-
N.H.	-	-	8	-	739	886	2	1	-	-	-	-
Vt.	2	-	-	-	419	429	1	-	-	-	1	-
Mass.	1	-	26	-	10,368	10,224	1	1	-	10	-	-
R.I.	1	-	-	1	1,572	1,504	4	2	-	-	-	-
Conn.	1	3	22	5	8,830	9,676	-	10	1	-	-	2
MID. ATLANTIC	19	3	154	14	121,766	120,553	57	89	7	16	-	34
Upstate N.Y.	8	3	62	3	20,060	21,655	8	20	4	3	-	3
N.Y. City	6	-	21	-	49,798	48,820	18	41	-	7	-	29
N.J.	2	-	25	-	22,306	22,656	15	20	3	4	-	1
Pa.	3	-	46	11	29,602	27,422	16	8	-	2	-	1
E.N. CENTRAL	6	7	359	12	132,234	149,200	18	16	-	6	-	10
Ohio	4	1	141	5	35,760	45,765	7	2	-	2	-	-
Ind.	2	-	96	3	16,703	12,673	4	6	-	-	-	-
Ill.	-	5	20	2	35,112	44,918	7	8	-	4	-	8
Mich.	U	1	73	-	32,597	32,582	U	U	U	U	U	-
Wis.	-	-	29	2	12,062	13,264	-	-	-	-	-	2
W.N. CENTRAL	4	17	102	4	44,684	47,248	9	15	-	2	-	8
Minn.	-	1	27	1	6,467	7,475	3	1	-	-	-	4
Iowa	1	5	54	1	4,868	5,155	2	4	-	-	-	-
Mo.	1	4	9	-	21,162	21,953	1	1	-	2	-	2
N. Dak.	1	1	-	-	586	603	-	-	-	-	-	-
S. Dak.	-	1	-	1	1,123	1,279	-	-	-	-	-	1
Nebr.	-	2	7	-	2,648	3,520	2	5	-	-	-	1
Kans.	1	3	5	1	7,850	7,263	1	4	-	-	-	-
S. ATLANTIC	14	30	206	10	248,175	244,430	35	79	7	10	3	11
Del.	1	-	-	-	4,180	3,949	-	-	1	-	-	-
Md.	1	-	25	-	31,369	29,223	1	16	2	2	1	4
D.C.	-	-	-	-	15,167	13,801	2	-	-	-	-	-
Va.	2	10	45	1	19,869	22,266	1	-	1	1	1	1
W. Va.	-	-	16	-	2,788	3,539	1	6	-	-	-	-
N.C.	-	-	31	1	39,668	37,015	2	6	-	1	-	-
S.C.	-	2	2	-	23,999	23,795	10	11	-	-	-	-
Ga.	2	4	14	1	48,337	50,488	5	25	-	-	1	1
Fla.	8	14	73	7	62,798	60,354	13	15	3	6	-	5
E.S. CENTRAL	6	14	69	6	82,436	82,334	11	20	1	1	1	-
Ky.	-	-	1	-	11,026	10,336	8	3	-	-	-	-
Tenn.	2	9	32	1	32,510	31,538	2	7	1	1	-	-
Ala.	4	4	18	5	24,401	24,478	1	10	-	-	1	-
Miss.	-	1	18	-	14,499	15,982	-	-	-	-	-	-
W.S. CENTRAL	12	45	229	1	130,994	129,419	51	17	1	65	1	31
Ark.	-	7	21	-	10,323	9,822	-	-	-	4	-	-
La.	1	8	31	-	24,574	23,486	-	-	-	-	-	-
Okla.	1	8	40	-	14,529	14,289	4	4	1	9	1	-
Tex.	10	22	137	1	81,568	81,822	47	13	-	52	-	31
MOUNTAIN	2	3	57	2	31,894	39,385	47	18	5	11	1	2
Mont.	-	2	-	-	1,337	1,421	-	-	-	-	-	-
Idaho	-	1	-	-	1,524	1,809	3	-	-	1	-	1
Wyo.	-	-	1	-	969	1,025	-	-	-	-	-	-
Colo.	1	-	20	1	8,445	10,514	-	-	-	-	-	-
N. Mex.	-	-	1	-	4,379	4,474	8	-	-	1	-	-
Ariz.	1	-	11	-	8,339	11,665	32	14	3	6	-	-
Utah	-	-	19	1	1,583	1,933	1	-	2	1	1	1
Nev.	-	-	5	-	5,318	6,544	3	4	-	2	-	-
PACIFIC	47	32	216	8	133,902	155,850	109	89	36	29	-	133
Wash.	3	1	14	1	11,393	13,204	-	9	1	-	-	15
Oreg.	2	-	4	-	7,818	9,161	2	5	1	-	-	2
Calif.	36	30	180	7	108,636	126,408	106	75	34	28	-	78
Alaska	-	1	12	-	3,449	4,046	-	-	-	-	-	1
Hawaii	6	-	6	-	2,606	3,031	1	-	-	1	-	37
Guam	U	-	-	1	118	122	U	U	U	U	U	1
P.R.	1	-	1	3	2,548	3,235	1	4	-	2	-	3
V.I.	-	-	-	-	255	252	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	388	445	U	U	U	U	U	44

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 1, 1983 and January 2, 1982 (52nd week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	8	1,008	8	1,697	3,012	52	2,913	74	5,196	36	16	2,283	2,083
NEW ENGLAND	-	51	-	16	86	4	162	1	196	2	1	20	123
Maine	-	-	-	-	5	-	12	-	43	-	-	-	33
N.H.	-	2	-	3	9	1	21	-	18	-	1	12	54
Vt.	-	-	-	2	3	1	12	-	7	-	-	-	-
Mass.	-	28	-	5	59	-	45	-	84	2	-	2	23
R.I.	-	3	-	-	-	-	16	-	18	-	-	1	-
Conn.	-	18	-	6	10	2	56	1	26	-	-	5	13
MID. ATLANTIC	-	174	5	175	1,044	16	530	5	348	12	-	109	232
Upstate N.Y.	-	33	-	113	228	4	180	3	102	-	-	53	117
N.Y. City	-	69	5	49	108	4	105	1	48	5	-	36	55
N.J.	-	35	-	6	61	4	108	-	55	3	-	18	47
Pa.	-	37	-	7	647	4	137	1	143	4	-	2	13
E.N. CENTRAL	1	86	-	84	92	4	390	32	2,580	4	2	216	436
Ohio	-	13	-	1	20	1	133	19	1,775	3	-	4	3
Ind.	-	4	-	2	9	-	44	1	50	-	1	31	137
Ill.	1	37	-	24	26	3	102	8	222	-	-	82	124
Mich.	U	26	U	57	34	U	80	U	401	U	U	53	44
Wis.	-	6	-	-	3	-	31	4	132	1	1	46	128
W.N. CENTRAL	1	33	-	49	10	2	146	13	655	1	2	64	87
Minn.	-	5	-	-	3	-	32	-	456	-	-	7	9
Iowa	-	8	-	-	1	1	13	2	65	-	-	-	5
Mo.	1	11	-	2	1	-	43	-	21	-	-	39	2
N. Dak.	-	2	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	11	-	1	-	-	1	-
Nebr.	-	4	-	3	4	1	15	-	1	-	-	-	1
Kans.	-	3	-	44	1	-	26	11	111	1	2	18	70
S. ATLANTIC	1	135	-	242	494	8	600	5	329	5	-	97	154
Del.	-	4	-	-	-	-	1	-	12	-	-	1	2
Md.	-	20	-	4	5	-	44	-	34	-	-	34	1
D.C.	-	4	-	1	1	-	5	-	-	-	-	-	-
Va.	-	41	-	14	18	1	73	-	44	-	-	12	9
W. Va.	-	7	-	3	9	-	10	4	123	1	-	3	23
N.C.	-	8	-	2	3	1	114	-	23	2	-	2	5
S.C.	-	4	-	-	2	-	70	-	18	-	-	1	8
Ga.	-	18	-	-	111	4	121	1	29	1	-	18	39
Fla.	1	29	-	218	345	2	162	-	46	1	-	26	67
E.S. CENTRAL	-	11	-	12	6	2	173	-	67	2	-	49	41
Ky.	-	5	-	1	2	-	25	-	22	1	-	31	27
Tenn.	-	-	-	6	2	1	79	-	25	-	-	2	13
Ala.	-	2	-	2	2	1	56	-	10	-	-	-	1
Miss.	-	4	-	3	-	-	13	-	10	1	-	16	-
W.S. CENTRAL	1	67	1	172	887	5	335	7	269	4	-	129	196
Ark.	-	4	-	-	26	-	15	1	9	-	-	1	7
La.	-	5	-	15	4	-	67	-	6	-	-	1	9
Okla.	-	8	-	30	6	1	34	-	-	-	-	3	4
Tex.	1	50	1	127	851	4	219	6	254	4	-	124	176
MOUNTAIN	-	38	-	28	39	1	122	7	129	6	9	103	102
Mont.	-	1	-	-	-	-	7	-	8	-	-	7	3
Idaho	-	2	-	-	1	-	7	-	5	-	-	7	4
Wyo.	-	-	-	1	1	1	6	-	2	-	-	8	15
Colo.	-	19	-	7	11	-	51	-	21	-	-	6	30
N. Mex.	-	3	-	-	9	-	16	-	-	-	-	6	5
Ariz.	-	9	-	17	7	-	21	7	63	6	7	29	22
Utah	-	4	-	3	-	-	13	-	22	-	2	28	12
Nev.	-	-	-	-	10	-	2	-	8	-	-	12	11
PACIFIC	4	413	2	919	364	10	455	4	623	-	2	1,496	712
Wash.	-	24	-	42	3	4	57	-	102	-	-	58	108
Oreg.	-	15	-	24	5	-	84	-	-	-	-	7	55
Calif.	4	366	2	847	339	6	298	3	484	-	2	1,416	533
Alaska	-	1	-	1	-	-	12	1	16	-	-	5	1
Hawaii	-	7	-	5	7	-	4	-	21	-	-	10	15
Guam	U	1	U	6	6	U	2	U	5	U	U	2	3
P.R.	-	4	-	138	306	-	9	-	100	-	-	13	6
V.I.	-	-	-	-	24	-	2	-	3	-	-	2	1
Pac. Trust Terr.	U	-	U	1	1	U	5	U	6	U	U	-	2

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending January 1, 1983 and January 2, 1982 (52nd week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tularemia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	32,553	30,876	456	25,728	254	5	400	3	979	6,066
NEW ENGLAND	608	598	36	772	7	-	18	-	12	42
Maine	8	5	3	58	-	-	-	-	-	26
N.H.	5	16	-	30	-	-	-	-	1	1
Vt.	8	17	-	12	-	-	2	-	-	2
Mass.	408	384	30	495	7	-	14	-	6	7
R.I.	27	36	-	36	-	-	-	-	2	-
Conn.	152	140	3	141	-	-	2	-	3	6
MID. ATLANTIC	4,413	4,437	76	4,305	7	1	70	-	45	204
Upstate N.Y.	438	455	18	744	7	-	12	-	16	114
N.Y. City	2,593	2,631	30	1,622	-	1	37	-	3	-
N.J.	666	617	11	845	-	-	13	-	14	17
Pa.	718	734	17	1,094	-	-	8	-	12	73
E.N. CENTRAL	1,816	2,354	29	3,787	1	1	37	-	87	602
Ohio	333	319	24	621	-	-	11	-	76	80
Ind.	199	315	2	469	-	-	2	-	2	74
Ill.	902	1,250	U	1,628	-	1	9	-	8	304
Mich.	279	379	U	855	-	U	12	U	-	7
Wis.	103	91	3	214	1	-	3	-	1	137
W.N. CENTRAL	540	684	16	771	41	1	18	-	34	1,197
Minn.	145	189	6	147	-	-	8	-	-	217
Iowa	34	38	1	73	4	-	1	-	4	390
Mo.	282	398	8	377	27	-	5	-	13	124
N. Dak.	7	12	-	15	-	-	-	-	-	97
S. Dak.	2	2	-	33	1	-	-	-	4	101
Nebr.	16	11	-	32	4	-	2	-	2	123
Kans.	54	34	1	94	5	1	2	-	11	145
S. ATLANTIC	8,925	8,159	110	5,362	15	2	50	-	521	1,321
Del.	25	17	-	49	-	-	-	-	-	2
Md.	498	570	-	619	3	-	10	-	50	102
D.C.	477	649	2	250	-	-	-	-	-	-
Va.	624	696	-	595	5	-	4	-	73	745
W. Va.	31	32	2	156	-	2	6	-	8	58
N.C.	724	633	37	824	-	-	3	-	225	66
S.C.	564	560	-	513	6	-	3	-	106	66
Ga.	1,828	1,963	29	885	-	-	3	-	52	213
Fla.	4,154	3,039	40	1,471	1	-	21	-	7	69
E.S. CENTRAL	2,259	2,003	21	2,326	8	-	22	1	99	643
Ky.	133	107	8	612	-	-	4	-	1	133
Tenn.	656	683	7	764	6	-	5	-	59	357
Ala.	835	615	-	618	-	-	10	1	19	146
Miss.	635	598	6	332	2	-	3	-	20	7
W.S. CENTRAL	8,597	7,336	63	3,100	128	-	48	2	161	1,166
Ark.	217	159	19	369	76	-	8	2	21	157
La.	1,852	1,672	8	481	4	-	3	-	2	33
Okla.	191	177	-	338	35	-	3	-	76	191
Tex.	6,337	5,328	36	1,912	13	-	34	-	62	785
MOUNTAIN	834	785	13	727	36	-	14	-	14	282
Mont.	5	11	-	42	4	-	-	-	5	97
Idaho	25	20	2	31	1	-	-	-	4	11
Wyo.	16	20	-	10	5	-	-	-	1	21
Colo.	236	249	-	108	7	-	3	-	1	48
N. Mex.	197	132	4	123	5	-	-	-	1	23
Ariz.	221	187	2	300	-	-	8	-	-	60
Utah	25	32	4	47	13	-	2	-	-	18
Nev.	109	134	1	66	1	-	1	-	2	4
PACIFIC	4,561	4,520	92	4,578	11	-	123	-	6	609
Wash.	160	196	15	301	1	-	10	-	-	8
Oreg.	113	122	3	194	3	-	4	-	1	5
Calif.	4,162	4,115	74	3,741	6	-	105	-	5	508
Alaska	18	14	-	89	1	-	1	-	-	88
Hawaii	108	73	-	253	-	-	3	-	-	-
Guam	1	-	U	39	-	U	-	U	-	-
P.R.	784	648	-	467	-	-	3	-	-	50
V.I.	27	16	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	114	-	U	1	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 1, 1983 (52nd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	710	498	135	34	17	26	50
Boston, Mass	167	100	37	14	5	11	21
Bridgeport, Conn	48	34	8	4	-	2	3
Cambridge, Mass	18	18	-	-	-	-	-
Fall River, Mass	32	24	6	2	-	-	-
Hartford, Conn	66	55	6	2	-	3	1
Lowell, Mass	30	21	7	2	-	-	1
Lynn, Mass	17	15	-	1	1	-	1
New Bedford, Mass	25	20	4	1	-	-	-
New Haven, Conn	62	40	11	1	5	5	9
Providence, R.I.	77	50	20	3	2	2	5
Somerville, Mass	5	3	2	-	-	-	-
Springfield, Mass	59	40	14	1	2	2	4
Waterbury, Conn	45	35	8	-	2	-	3
Worcester, Mass	59	43	12	3	-	1	2
MID. ATLANTIC	2,482	2,050	222	55	59	52	100
Albany, N.Y.	56	42	13	-	1	-	1
Allentown, Pa.§	19	19	-	-	-	-	-
Buffalo, N.Y.	138	97	27	5	3	6	15
Camden, N.J.	32	22	10	-	-	-	-
Elizabeth, N.J.	18	16	2	-	-	-	-
Erie, Pa.†	40	25	12	2	-	1	-
Jersey City, N.J.	36	30	4	2	-	-	-
N.Y. City, N.Y.§	1,492	1,377	11	17	35	28	50
Newark, N.J.	49	21	20	4	1	3	4
Paterson, N.J.	38	20	10	3	3	2	1
Philadelphia, Pa.†	96	58	26	2	7	3	5
Pittsburgh, Pa.†	48	30	13	4	-	1	1
Reading, Pa.	46	36	4	4	2	-	3
Rochester, N.Y.	119	87	22	5	2	3	10
Schenectady, N.Y.	27	25	2	-	-	-	1
Scranton, Pa.†	29	22	4	1	1	1	2
Syracuse, N.Y.	93	64	22	2	3	2	3
Trenton, N.J.	31	20	7	2	1	1	1
Utica, N.Y.	18	17	1	-	-	-	1
Yonkers, N.Y.	37	22	12	2	-	1	2
E.N. CENTRAL	2,076	1,407	433	108	48	78	67
Akron, Ohio	56	39	10	-	1	6	-
Canton, Ohio	50	37	10	2	1	-	2
Chicago, Ill.	473	275	126	31	21	20	13
Cincinnati, Ohio	111	67	30	12	1	1	9
Cleveland, Ohio	139	86	33	12	4	4	1
Columbus, Ohio	133	81	37	7	3	5	3
Dayton, Ohio	88	54	25	5	2	2	1
Detroit, Mich.§	269	245	1	6	6	7	8
Evansville, Ind.	58	38	13	2	1	4	5
Fort Wayne, Ind.	33	21	8	1	-	3	2
Gary, Ind.	25	12	9	2	1	1	1
Grand Rapids, Mich.	50	41	8	-	-	1	4
Indianapolis, Ind.	147	84	45	5	4	9	3
Madison, Wis.	25	12	8	4	-	1	2
Milwaukee, Wis.	112	88	18	4	2	-	5
Peoria, Ill.	30	24	3	-	-	3	2
Rockford, Ill.	65	48	11	6	-	-	4
South Bend, Ind.	52	36	15	1	-	-	2
Toledo, Ohio	88	69	10	3	1	5	2
Youngstown, Ohio	72	50	13	5	-	4	-
W.N. CENTRAL	607	406	136	27	20	18	39
Des Moines, Iowa	44	29	9	3	2	1	6
Duluth, Minn.	15	8	6	1	-	-	2
Kansas City, Kans.	25	17	5	1	1	1	-
Kansas City, Mo.	92	60	23	6	3	-	5
Lincoln, Nebr.	27	21	5	1	-	-	4
Minneapolis, Minn.	68	49	15	2	2	-	2
Omaha, Nebr.	54	39	12	1	1	1	4
St. Louis, Mo.	172	114	39	5	7	7	5
St. Paul, Minn.	39	28	8	1	-	2	3
Wichita, Kans.	71	41	14	8	4	6	8

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,129	709	286	65	33	36	47
Atlanta, Ga.	160	92	42	12	3	11	2
Baltimore, Md.	193	122	49	12	8	2	1
Charlotte, N.C.	87	47	26	6	5	3	7
Jacksonville, Fla.	95	53	34	4	2	2	6
Miami, Fla.	133	91	28	8	5	1	4
Norfolk, Va.	42	26	13	2	1	-	1
Richmond, Va.	88	54	25	3	4	2	5
Savannah, Ga.	42	23	12	5	1	1	4
St. Petersburg, Fla.	103	87	10	2	-	4	4
Tampa, Fla.	58	43	6	5	-	4	2
Washington, D.C.	87	44	30	4	4	5	3
Wilmington, Del.	41	27	11	2	-	1	6
E.S. CENTRAL	615	402	141	34	27	11	25
Birmingham, Ala.	103	65	27	3	6	2	1
Chattanooga, Tenn.	54	34	12	4	3	1	2
Knoxville, Tenn.	53	37	12	3	1	-	2
Louisville, Ky.	78	51	19	2	4	2	5
Memphis, Tenn.	139	82	44	7	3	3	5
Mobile, Ala.	63	49	5	5	3	1	5
Montgomery, Ala.	48	32	8	5	2	1	1
Nashville, Tenn.	77	52	14	5	5	1	4
W.S. CENTRAL	961	531	236	89	60	45	35
Austin, Tex.	34	15	9	4	-	6	-
Baton Rouge, La.	17	11	4	2	-	-	-
Corpus Christi, Tex.	28	11	9	4	4	-	1
Dallas, Tex.	186	105	43	14	13	11	8
El Paso, Tex.	71	41	16	7	4	3	5
Fort Worth, Tex.	78	51	12	5	5	5	5
Houston, Tex.	66	33	17	9	5	2	-
Little Rock, Ark.	59	33	21	2	1	2	6
New Orleans, La.	127	65	31	14	12	5	1
San Antonio, Tex.	155	86	41	11	11	6	4
Shreveport, La.	58	37	15	5	1	-	-
Tulsa, Okla.	82	43	18	12	4	5	5
MOUNTAIN	508	324	121	38	10	15	15
Albuquerque, N. Mex.	60	37	13	7	-	3	1
Colo. Springs, Colo.	36	24	7	1	1	3	2
Denver, Colo.	65	37	18	7	1	2	4
Las Vegas, Nev.	61	32	17	8	4	-	-
Ogden, Utah	17	11	6	-	-	-	-
Phoenix, Ariz.	135	97	25	8	3	2	3
Pueblo, Colo.	28	18	9	1	-	-	2
Salt Lake City, Utah	49	32	9	4	-	4	2
Tucson, Ariz.	57	36	17	2	1	1	1
PACIFIC	1,429	960	317	91	30	30	91
Berkeley, Calif.	23	16	5	-	-	2	1
Fresno, Calif.	70	53	12	2	-	3	5
Glendale, Calif.	19	16	3	-	-	-	1
Honolulu, Hawaii	57	37	15	4	1	-	4
Long Beach, Calif.	77	45	17	7	-	8	-
Los Angeles, Calif.	243	157	63	15	4	4	9
Oakland, Calif.	43	32	7	3	-	1	2
Pasadena, Calif.	37	28	7	1	1	-	3
Portland, Oreg.	103	72	23	6	1	1	13
Sacramento, Calif.	66	45	11	5	3	2	5
San Diego, Calif.	130	87	22	11	7	2	12
San Francisco, Calif.	169	107	49	9	2	2	4
San Jose, Calif.	165	99	43	11	8	4	13
Seattle, Wash.	136	108	16	9	2	1	12
Spokane, Wash.	56	32	20	3	1	-	2
Tacoma, Wash.	35	26	4	5	-	-	5
TOTAL	10,497††	7,287	2,027	541	304	309	469

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* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Influenza — Continued

Reported by W Moon, MD, Crawford County, B Berman, MD, Genesee County, Michigan; C Hedberg, V Thelen, Hennepin County, Minnesota; State Laboratory Directors and State Epidemiologists, Consolidated Surveillance Activity, Epidemiology Program Office, WHO Collaborating Center for Influenza, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Classification of Measles Cases and Categorization of Measles Elimination Programs

With next week's issue of the MMWR, Tables I and III will reflect a new system of classification for measles cases. This system, and the categorization of immunization programs, has been developed by the Division of Immunization in conjunction with the directors of each immunization program and the Conference of State and Territorial Epidemiologists.

Because the number of reported measles cases has decreased dramatically during the last several years, the need to develop clinical, epidemiologic, and programmatic classifications of measles cases to more effectively implement measles elimination programs has increased. Careful differentiation of cases as to their preventability and accessibility, and whether they represent spread within a state or from another state or importation from abroad, becomes important. It is essential to establish uniform criteria for categorization of measles elimination programs to determine whether programs have interrupted indigenous measles transmission and whether their program elements are sufficiently institutionalized to permit maintenance of the gains.

CLASSIFICATION OF MEASLES CASES

I. **Clinical classification**: A clinical case of measles* is 1) a generalized maculopapular rash lasting 3 or more days, 2) temperature of 38.3 C (101 F) or greater, and 3) one of the following: cough, coryza, conjunctivitis. Such a standard case definition was adopted to avoid the requirement that cases be confirmed virologically or serologically before being considered reportable measles cases, thus enabling health departments to act promptly on cases of rash illnesses and institute control measures rapidly.

Not all states have accepted this definition. Some have suggested a more specific clinical case definition. Several require serologic confirmation before reporting cases officially. As the measles incidence rate falls, serologic confirmation becomes increasingly important to the diagnosis. Dependence on seroconfirmation for reporting, however, may decrease the number of cases reported and might delay outbreak control and interstate notification. The Immunization Practices Advisory Committee recommends that all rash illness with fever be investigated and a single case meeting the clinical case definition be considered an outbreak and sufficient reason to begin control measures. The consequences of overdiagnosing or accepting non-measles cases of rash illness with fever are less serious than those of not acting promptly on a true case. With the availability of the capillary filter paper technique, seroconfirmation has become progressively more accessible; however, seroconfirmation should continue to be used only as a retrospective tool to confirm measles. Generally, serology cannot be used to rule out measles. A diagnosis should be considered confirmed in the presence

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*In April 1979, the Conference of State and Territorial Epidemiologists agreed to adopt a standard case definition of measles to permit more uniformity in their reporting of clinically confirmed measles cases.

Measles – Continued

of good clinical and/or epidemiologic evidence, even in the absence of confirmatory serology.

Since the measles case definition is sensitive but not very specific, the need for quantifying the degree of certainty in the diagnosis of measles becomes increasingly important as cases become fewer. Cases are to be classified as:

A. A *suspect case* is any rash illness with fever;

B. A *probable case* meets the clinical case definition, is not epidemiologically linked to another probable or confirmed case, and has no or noncontributory serologic testing;

C. A *confirmed case* meets the clinical case definition and is epidemiologically linked to another confirmed or probable case or is serologically confirmed. A serologically confirmed case does not need to meet the clinical case definition.

It is possible that two epidemiologically linked cases may occur without serologic confirmation and would appropriately be considered confirmed. However, ideally there should be at least one serologically confirmed case in each chain of identified transmission, and each isolated case should be serologically confirmed. As of January 1, 1983, weekly telephone reports to the *MMWR* should include only confirmed cases; they may be designated as either imported or indigenous.

II. **Epidemiologic classification:** The differentiation between imported cases and indigenous cases becomes increasingly important as success at interrupting indigenous transmission of measles is assessed. For a given state, a case that may be indigenous to the United States may, in fact, represent an out-or-state importation.

A. An *indigenous case* is defined as a case of measles within a state unrelated to an imported case or with onset occurring more than two generations after an imported case to which it is epidemiologically linked. Any case that cannot be proven as imported or spread from an imported case should be classified as indigenous.

B. An *imported case* has its source outside the state. Rash onset occurs within 18 days of entering the state, and illness cannot be linked to local transmission. Imported cases are to be classified as:

1. *International*—Importation from another country.
2. *Out-of-state*—Importation from another state. Designation of an out-of-state importation requires documented face-to-face contact with a person with measles outside the state or documented evidence that the person was out-of-state for the entire period during which she or he might have become infected. A resident of one state who acquires infection from another state (but becomes ill in the state of residence) should be reported as imported by the state of residence.

C. An *importation-spread case* is directly traceable to a known imported case within two generations.

Table I will list total measles cases and note the number that represents international importations and their spread cases. Table III will include out-of-state importations and their spread cases, along with international importations and their spread cases.

Differentiation between indigenous, imported, and importation-spread cases will permit analysis of sources in a systematic fashion. Classifications are limited because the potential exists for misclassification of cases (e.g. when an undetected importation leads to spread that will, of necessity, be classified as indigenous).

III. **Programmatic classification:** To assess program effectiveness under current guidelines, it is necessary to determine the proportion of cases preventable by immunization and to examine the reasons these cases were not prevented. CDC differentiates between preventable and nonpreventable cases and determines the accessibility and relationship of the case to the health care system. Cases are to be classified as follows:

A. A case is considered *preventable* if measles illness occurs in a U. S. citizen: (1) at least 16 months of age, (2) born after 1956, (3) lacking adequate evidence of immunity to measles,* (4) without a medical contraindication to receiving vaccine, and (5) with no religious or philosophical exemption under state law.

1. An *accessible case* occurs in a child enrolled in a school (ages 5-19 years) or day-care center who, with appropriate application of state law, could have been vaccinated.
2. A *hard-to-reach case* occurs in a child at least 16 months of age, born after 1956, who has received at least one other immunization in the United States but who is not in a school or day-care center affected by state law. This child is considered to have once entered the health care system, and, therefore, could have been vaccinated.
3. Other or unknown

B. A case is considered *not preventable* under current program guidelines if measles illness occurs in a person: (1) less than 16 months of age, (2) born before 1957, (3) with adequate evidence of immunity, (4) with a medical contraindication to receiving vaccine, or (5) with a religious or philosophical exemption under state law.

CATEGORIZATION OF IMMUNIZATION PROGRAMS

Just as it is important to standardize measles case definitions, it is essential to establish uniform criteria to categorize measles elimination programs. As measles elimination is accomplished, a mechanism for "certifying" or categorizing programs' achievements is necessary. The absence of measles does not in itself guarantee the maintenance of a measles-free state; therefore, a series of performance criteria that are integral to the elimination of measles and assure the maintenance of that achievement has been developed. In addition, these elements provide a basis for the control of other vaccine-preventable diseases.

I. **Program impact**: No indigenous cases of measles have occurred within the preceding 12 months.

II. **Program elements**

A. **Surveillance**: A surveillance system is in place; all public and private health providers know measles is a reportable disease, understand the reporting procedures, and are aware of the need for prompt reporting.

1. Performance criteria:
   - a. At least a sample of schools and day-care centers are involved in routine reporting, which could include negative reporting in high-risk areas at least until December 31, 1983.
   - b. At least semi-annual contact is made with reporting sources to emphasize the need for rapid reporting and provide them with a specific telephone number to report suspect cases.

B. **Case investigation, confirmation, and containment**

1. Investigation
   - a. Performance criteria: Investigation of all suspect cases is initiated within 1 work day after initial report using standardized investigation forms.
2. Confirmation
   - a. Performance criteria: A uniform and standard clinical case definition is in use. Laboratory confirmation is sought on all cases not directly traceable to a source.

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*Documented receipt of live measles vaccine on or after the first birthday or a physician-diagnosed measles disease.

Measles – Continued

3. Containment
   a. Performance criteria: Containment procedures are initiated within 3 calendar days of identification of a probable or confirmed case.
      (1) School exclusion procedures are utilized and strictly enforced.
      (2) Interstate notification occurs within 1 work day of identification of a probable or confirmed case.
      (3) A specific outbreak control manual is available and routinely followed in containment activities.
      (4) Spread is limited to two generations beyond the index case.[*]
      (5) Serologic data are interpreted accurately.
      (6) Source[†] identification is made in at least 50% of index cases.
      (7) Cases are correctly classified and reported as outlined in the previous section.
      (8) Routine tracking of time lapses between onset, reporting, and action phases is maintained.

C. **Operational elements**
1. Enforcement of laws/regulations
   a. Performance criteria:
      (1) A licensed day-care facility immunization law/regulation is in place, requiring proof of immunity of all enrollees.[§]
      (2) A school enterer/attendance law is in place, requiring proof of immunity of all kindergarten and/or first grade students in both public and private schools.[§]
      (3) The school and day-care laws/regulations are strictly enforced[§] by the state and local authorities so that a child is denied admission or excluded for noncompliance.
2. Assessment of immunization status
   a. Performance criteria:
      (1) An annual assessment of the immunization status of all kindergarten and/or first grade attendees is conducted.
      (2) An annual assessment of the immunization status of all day-care center attendees is conducted.
      (3) Kindergarten and/or first grade assessments are completed by December 31 of each year.
      (4) Licensed day-care center assessments are completed annually.
      (5) These assessments demonstrate more than 95% vaccinated according to state requirements.
      (6) Validation surveys are conducted annually to verify assessment data in at least a sample of kindergarten and/or first grade and licensed day-care facilities.
3. Service delivery
   a. Performance criteria:
      (1) Tickler/recall systems are in place in at least 50% of public clinics to ensure

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[*] Index case: A probable or confirmed case of measles that is not part of a previously identified chain of transmission.

[†] Source: The case or outbreak to which a case of measles is epidemiologically linked. A foreign country may be considered a source even without identifying specific exposure to an outbreak within that country.

[§] Where state law permits or exists

Measles – Continued

that all children under 2 years of age are appropriately immunized in the project area.

(2) Prototype tickler/recall systems are introduced and promoted through state and local chapters of appropriate professional organizations.

(3) Immunization services are promoted for susceptible adolescents in high school and college.

4. Immunization records
   a. Performance Criteria:

(1) Antigen-specific information is recorded at least by month and year on standard records for all new school and licensed day-care center enrollees.

(2) Standard parent-maintained personal immunization records are presented to parents in all public clinics and made available to private physicians and promoted as part of education activities.

EVALUATION PROCESS

A two-stage evaluation process is planned for the certification of immunization programs related to the absence of indigenous measles: an internal and an external evaluation. For the internal assessment, a self-assessment protocol is to be made available for an immunization program to evaluate itself. This will be followed by an external evaluation.

The infrastructure for a complete immunization program may not be in place at the time of evaluation. Therefore, minimal performance standards will be applied against the above described criteria to delineate the degree to which each has been carried out and the validity of each assessment.

Reported by Div of Immunization, Center for Prevention Svcs, CDC.

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† In addition to the 52 weekly issues, the following *MMWR* publications are considered part of Volume 31 for 1982:

1-Suppl. Prevention of Malaria in Travelers 1982. Issued April 16, 1982

1-Suppl. Sexually Transmitted Diseases: Treatment Guidelines 1982. Issued August 20, 1982

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES / PUBLIC HEALTH SERVICE

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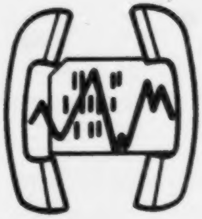

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Foreword

This volume contains the 1982 official statistics for the reported occurrence of notifiable diseases as well as selected data for subjects of special interest.

Part 1 contains morbidity information for each of 46 currently reportable conditions; tables contain the number of cases of notifiable diseases reported to the Centers for Disease Control (CDC) for 1982, including the distribution of cases by month, geographic location, and age. Part 2 includes additional epidemiologic information for 40 reportable conditions. Part 3 covers seventeen other subjects of special interest.

The Appendix contains tables showing numbers of cases of notifiable diseases reported to CDC and the National Office of Vital Statistics for the past 50 years and tables of deaths from specified notifiable diseases and selected non-notifiable conditions reported to the National Center for Health Statistics for the years 1971-1980.

Most of the data for this volume are obtained from annual summary reports or case-investigation forms, submitted by state and territorial health departments.

The 1982 *MMWR:* A Chronicle of Public Health Concerns

The 52 issues of the *MMWR* published in 1982 dealt with a broad base of topics of public health concern. Multiple reports of new cases of acquired immunodeficiency syndrome (AIDS) appeared in company with a series of countdown summaries on measles, as reported numbers of cases of the latter continued to reach record new low levels. Chronic diseases, behavioral risk factors, toxic reactions, environmental hazards, reduced risk of some types of cancer associated with the use of oral contraceptives—all were represented in the 1982 *MMWR* volume.

A clear, if gradual, shift in emphasis for the *MMWR*, for CDC, and for public health practice in general has become apparent in recent years. In the period following CDC's inception in 1946, efforts were directed primarily at the detection and control of infectious diseases—with its attendant morbidity and associated mortality. More recently, the direction has moved well beyond control efforts to stress disease prevention and health promotion (*1*). Thus, the scope of public health efforts has extended beyond simply treating persons for current illness or even responding to a medical crisis by applying life-saving techniques. More and more, programs are being aimed at improving quality of life while assuring the opportunity for a normal life span.

An innovation in the *MMWR* beginning in March 1982 reflects this concern about the length and quality of life. Published monthly, Table V shows "Years of Potential Life Lost, Deaths, and Death Rates by Cause of Death, and Estimated Number of Physician Contacts, by Principal Diagnosis" (*2*). By various measures this table indicates the relative magnitude of certain public health problems amenable to prevention strategies.

Causes of death are listed in Table V in descending order of the number of potential years of lost life attributed to them. Based on mortality estimates for 1980 and 1981, heart disease, cancer, and cerebrovascular disease accounted for approximately 68% of all deaths reported in the United States; "injuries" (i.e., motor-vehicle and other accidents, suicide, and homicide) accounted for 8%. In terms of age at death, however, the relative importance of causes of death changes remarkably. Injuries accounted for approximately 41% of the total years of life lost prematurely; whereas heart disease, cancer, and cerebrovascular disease accounted for 37%. The societal cost of injuries is estimated at >$83 billion/year; yet relatively little effort has been made to prevent injuries. This imbalance is, in part, due to a widespread misunderstanding about causes of injuries. Table V and accompanying articles focus on the preventability of many injuries—and of other causes of avoidable death. This emphasis should help direct public health resources to causes of death and morbidity that can be averted.

A report on behavioral risk factors in the 1982 *MMWR* volume was stimulated by the Surgeon General's *Report on Health Promotion and Disease Prevention* (*3*). This advisory emphasized that simple measures to enhance the prospects of good health are within the practical grasp of most Americans. A variety of behavioral risk factors, e.g., alcohol misuse, cigarette smoking, obesity, sedentary lifestyle, lack of seat-belt use, and uncontrolled hypertension, were reported to influence an individual's health.

During the first quarter of 1982, five states (Alabama, Florida, Nebraska, Virginia, and West Virginia) conducted risk-factor surveys that confirmed the Surgeon General's findings. They also elucidated age groups at particular risk from the various potential hazards.

Such surveys represent a growing trend by state health departments to collect behavioral risk-factor information to monitor and improve the health status of their citizens. The need for such efforts is emphasized by the finding of a significant association of preventable practices that can contribute to illness, injury, and premature death.

One much-publicized health problem that has generated both interest and concern as well as anxiety among the medical community and the general public is AIDS. CDC's AIDS Task Force, state and local health departments, and private practitioners have all collaborated in investigating AIDS—defined as the occurrence of conditions associated with a defect in cell-mediated immunity, affecting a person with no known cause for diminished resistance to that disease. Such diseases include Kaposi's sarcoma, *Pneumocystis carinii* pneumonia, and other serious opportunistic infections (*4*). The 1982 *MMWR* reflected the concern of public health authorities about this mysterious syndrome.

MMWR articles chronicled the nation's experience with the 1,147 cases of AIDS (591 of them fatal) diagnosed by the end of 1982. They described high-risk groups (sexually active homosexual males, intravenous-drug abusers, male Haitians who have recently become U.S. residents, and persons with hemophilia A or persons who have intimate contact with blood or blood products from an AIDS patient [including transfusion recipients]). Additionally, they discussed geographic trends and possible factors related to transmission of AIDS.

Scanning the "Contents" section of the 1982 *MMWR* shows that measles and the campaign for its elimination received wide coverage. In 1982, the reported occurrence of measles reached its lowest level since national reporting of measles began in 1912 (*5*). A total of 1,714 cases was reported, for a record low incidence of 0.7 cases/100,000 population of all ages. Of the total reported 1,714 measles cases, 119 (7%) were imported, with sources in 32 different countries. In addition, 498 cases within the United States were epidemiologically linked to 19 international importations. Thus, international importations and associated cases together accounted for 36% (617/1,714) of all measles cases reported in 1982.

The measles elimination program is proving effective because of public health strategies implemented to ensure vaccination of targeted populations with a safe and highly immunogenic vaccine. The *MMWR* has followed and will continue to follow in its pages the countdown toward elimination of indigenous measles.

An advisory published in the *MMWR* in June 1982 received much publicity in the lay and professional media. The Surgeon General recommended that salicylates such as aspirin not be given to children with influenza or chickenpox because of an association with Reye syndrome. CDC estimates that 600-1,200 cases of Reye syndrome occur each year in the United States, primarily among persons 5-16 years old. Death occurs in 20%-30% of reported cases, and some survivors have been reported to have permanent brain damage (*6*).

Also reported in the 1982 *MMWR* was the dramatic increase in the use of cocaine in the United States since the early 1970s. A national survey indicated that almost 10 million people over 11 years of age reported having used cocaine within the previous year; almost half of these had used cocaine within a month before the survey. Two-thirds of these self-reported cocaine users ranged in age from 18 to 25 years. This increased prevalence of cocaine use and of the health consequences associated with that use may be due to increasing availability and changes in the patterns of use. In addition, the *MMWR* article reported that changes in the route of administration of the drug from inhaling or "snorting" to freebasing (processing the cocaine into a pure form by removing the hydrochloride base and then smoking the freebase) and to intravenous use may be causing increased prevalence of adverse health consequences (*7*).

Preliminary analysis of an ongoing, multi-center case-control study of oral contraceptives and cancer was published in the *MMWR* in 1982. This article indicated that women who had used oral contraceptives were approximately half as likely to develop ovarian and endometrial cancer as women who had never used them and that, despite previous concerns, contraceptive use did not appear to increase a woman's risk of breast cancer (*8*).

In all, over 200 reports and announcements appeared in the *MMWR* in 1982. An in-depth review of this approximately 700 pages of text, tables, and figures is not possible here, but the reader is encouraged to continue the process merely outlined above. Experience indicates that in 1983 and following years new sources of public health information—and additional areas of concern—will emerge. New program directions will continue to be dictated by this process. The *MMWR* is one reflection of CDC's response to this need.

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History of Morbidity Reporting and Surveillance in the United States

In 1878 an Act of Congress authorized collection of morbidity reports by the Public Health Service to establish quarantine measures for diseases such as cholera, smallpox, plague, and yellow fever. In 1893 another Act authorized the collection of information on a weekly basis from state and municipal authorities throughout the United States, and gradually an increasing number of states submitted monthly and annual summaries to the Public Heath Service. It was not until 1925, however, that all states began to report regularly.

Responsibilities for data collection and analysis were subsequently transferred several times within the Public Health Service. The Communicable Disease Center acquired responsibility for the venereal disease program in 1957, the tuberculosis program in 1960, the collection of data on nationally notifiable diseases in 1961, and the foreign quarantine program in 1967. The changing characteristics of diseases have necessitated modifications in the reporting system and the addition of new diseases.

In 1970 the Communicable Disease Center was renamed the Center for Disease Control to reflect a broader mandate in preventive health services. Over the years the surveillance systems maintained by CDC have expanded, and emphasis has shifted as certain diseases have had lower incidences and other diseases have taken on new aspects. In addition, CDC's increasing interest in noncommunicable diseases is reflected in new programs in family planning, nutrition, occupational hazards, congenital birth defects, and chronic diseases.

In 1978 the Consolidated Surveillance and Communications Activity (CSCA) was established in the Bureau of Epidemiology to provide ongoing examination of surveillance efforts, including MMWR Statistics. The Activity's primary responsibility was to work with state health departments and centers within CDC to propose, coordinate, and evaluate future changes in surveillance activities.

In 1980, CDC was officially reorganized and renamed the Centers for Diease Control. In the reorganization, CSCA (now the Division of Surveillance and Epidemiologic Studies [DSES]) and the responsibility for publishing the *Morbidity and Mortality Weekly Report* were transferred to the newly created Epidemiology Program Office.

Data Sources

Data on the reported occurrence of notifiable diseases are routinely published in the *MMWR* and compiled in final form in the *Annual Summary* from annual reports submitted by the state and territorial departments of health. Also included in the *Summary* are data from national surveillance activities of various programs at CDC. It should be noted that the *MMWR* morbidity surveillance system and the national surveillance programs are separate.

Notifiable disease reports published in the *MMWR* are the authoritative and archival counts of cases. Data from surveillance records for selected diseases, which are useful for detailed epidemiologic analyses, are published on a periodic basis. Case-report totals from surveillance activities may not always agree exactly with those published in the *MMWR* because of differences in the timing of reports or because of refinements in case definition.

The Epidemiology Program Office gratefully acknowledges the CDC units listed below for their contributions of statistical data from surveillance program records. Requests for further information regarding these data should be directed to the appropriate source.

Center for Environmental Health
    Chronic Diseases Division (Congenital malformations and lead poisoning)
Center for Health Promotion and Education
    Division of Health Education (Behavioral risk factors)
    Division of Nutrition (Behavioral risk factors and nutrition)
    Division of Reproductive Health (Abortion and surgical sterilization of females)
Center for Infectious Diseases
    Office of the Director (Acquired immunodeficiency syndrome)
    Division of Bacterial Diseases (Legionellosis and toxic-shock syndrome)
    Division of Vector-Borne Viral Diseases (Dengue and plague)
    Division of Viral Diseases (Encephalitis, influenza, rabies, and Reye syndrome)
Center for Prevention Services
    Quarantine Division (Cholera, plague, and refugees)
    Tuberculosis Control Division (Tuberculosis)
    Venereal Disease Control Division (Gonorrhea, syphilis, chancroid, granuloma inguinale, lymphogranuloma venereum, and pelvic inflammatory disease)
Epidemiology Program Office
    Division of Surveillance and Epidemiologic Studies (Premature deaths, sudden deaths among Indochinese refugees, and pneumonia-influenza mortality in 121 reporting areas)
National Institute of Occupational Safety and Health
    Division of Surveillance, Hazard Evaluations, and Field Studies (Occupational exposure to lead)

Totals for the United States, unless otherwise stated, do not include data for Guam, Puerto Rico, the Virgin Islands, Commonwealth of the Northern Mariana Islands (CNMI), and the Pacific Trust Territory, which includes the Republic of Marshalls, Republic of Palau, and the Federated States of Micronesia. Data from the Pacific Trust Territory exclude those for CNMI.

Data from California are provisional and are included in order not to delay publication of this document. The California Department of Health Services should be contacted for final data.

Data in the *Annual Summary* should be interpreted with caution. Some diseases such as plague and rabies that cause severe clinical illness and are associated with serious consequences are probably reported quite accurately. However, diseases such as salmonellosis and mumps that are clinically mild and infrequently associated with serious consequences are less likely to be reported. Additionally, subclinical cases are seldom detected except in the course of special studies. The degree of completeness of reporting is also influenced by the diagnostic facilities available, the control measures in effect, and the interests and priorities of state and local officials responsible for disease control and surveillance. Finally, factors such as the introduction of new diagnostic tests (e.g., for hepatitis B) and the discovery of new disease entities (e.g., infant botulism and legionellosis) may cause changes in disease reporting independent of the true incidence of disease. Despite these limitations, the data in this report have proven to be useful in analyzing trends.

Mortality data, with the exception of statistics obtained from the 121 participating cities, are from the National Center for Health Statistics. Each year these data are also published in *Vital Statistics of the United States, Vol. II.*

Data on the notifiable diseases before 1960 are obtained from publications of the National Office of Vital Statistics.

Data for the resident population of states are from the U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 927, *Provisional Estimates of the Resident Population of States, July 1, 1982.* Estimates for the resident population, by age, sex, and race are from Series P-25, No. 929, *Estimates of the Population of the United States, by Age, Sex, and Race: 1980 to 1982*, and from unpublished data.

Population data from states in which diseases were not notifiable or from which age-specific data were not available were excluded from rate calculation. Rates in the *1982 Annual Summary* were calculated using resident population data except for chancroid, gonorrhea, granuloma inguinale, lymphogranuloma venereum, and syphilis, for which only civilian resident population data were utilized.

EXPLANATION OF SYMBOLS USED IN TABLES

Data not available	NA
No reported cases	—
Report of disease not required by state health department (not notifiable)	NN

PART 1:

Summaries of Notifiable Diseases in the United States

NOTIFIABLE DISEASES — Summary of reported cases, by month, United States, 1982

Disease	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
Amebiasis	7,307	368	537	773	664	676	805	553	577	556	583	507	702	6
Anthrax	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Aseptic meningitis	9,680	368	294	338	307	351	657	1,023	1,520	1,691	1,421	930	753	27
Botulism, total[1]	97	7	5	8	5	5	14	12	6	6	12	8	9	—
Food-borne	33	4	3	2	—	—	4	6	4	1	1	5	3	—
Infant	61	2	2	6	5	4	10	6	2	4	11	3	6	—
Brucellosis (undulant fever)	173	9	7	13	15	17	22	14	17	13	21	9	14	2
Chickenpox	167,423	16,620	20,905	30,377	26,529	27,154	16,004	5,343	1,201	1,240	2,679	6,044	13,319	8
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	2	—	—	—	—	—	1	—	1	—	—	—	—	—
Encephalitis, primary	374	11	7	16	21	13	23	58	91	71	18	12	8	25
Indeterminate	1,090	51	56	57	61	65	61	136	186	153	67	57	25	94
Post-childhood infections	36	6	4	6	3	1	4	3	1	3	2	—	2	1
Gonorrhea[2]	960,633	71,371	71,801	78,746	74,628	76,295	83,855	84,088	80,919	89,117	86,350	75,626	87,837	—
Hepatitis A	23,403	1,685	2,053	2,111	1,715	1,985	1,679	1,748	1,847	2,080	2,187	1,880	2,336	97
Hepatitis B	22,177	1,588	1,568	1,987	1,730	1,823	1,827	1,688	1,830	1,909	1,903	1,921	2,098	306
Hepatitis, non-A non-B	2,629	128	195	251	188	242	204	190	221	221	258	241	282	8
Hepatitis, unspecified	8,564	649	679	800	682	689	721	696	688	743	728	681	756	52
Legionellosis	654	38	42	39	48	51	44	51	74	69	66	54	73	5
Leprosy	250	9	17	18	18	23	12	25	15	23	12	15	55	8
Leptospirosis	100	6	6	2	6	6	5	6	7	16	13	9	18	—
Malaria	1,056	57	64	72	71	97	126	122	113	118	86	60	64	6
Measles (rubeola)	1,714	37	39	136	247	225	252	153	88	99	260	107	69	2
Meningococcal infections, total	3,056	260	267	370	356	291	253	199	166	171	216	240	261	6
Civilian	3,038	259	264	367	356	291	249	195	166	170	215	240	260	6
Military	18	1	3	3	—	—	4	4	—	1	1	—	1	—
Mumps	5,270	305	482	883	784	753	581	193	104	159	241	290	436	59
Pertussis (whooping cough)	1,895	63	94	92	120	102	118	191	203	209	271	197	231	4
Plague	19	1	—	—	—	3	1	7	5	—	1	—	1	—
Poliomyelitis, total	8	—	1	—	1	—	1	—	2	—	—	1	2	—
Paralytic	8	—	1	—	1	—	1	—	2	—	—	1	2	—
Psittacosis	152	12	8	10	23	16	17	19	11	8	10	10	8	—
Rabies, human	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rheumatic fever	137	9	13	16	13	11	16	9	8	14	4	12	6	6
Rubella (German measles)	2,325	114	160	322	323	459	307	149	113	72	84	73	124	25
Rubella congenital syndrome	7	—	—	2	1	2	—	—	—	1	—	—	1	—
Salmonellosis	40,936	2,465	2,045	2,336	2,362	2,730	3,402	4,140	4,724	4,745	4,477	3,508	3,546	456
Shigellosis	18,129	1,093	1,001	1,139	876	943	1,198	1,525	2,256	2,364	2,081	1,758	1,650	245
Syphilis, primary & secondary[2]	33,613	2,567	2,928	2,815	2,718	2,560	2,804	2,681	2,882	2,871	2,964	2,930	2,893	—
Tetanus	88	4	6	2	7	12	7	11	12	6	6	6	9	—
Trichinosis	115	26	8	11	7	11	4	3	6	7	11	5	10	6
Tularemia	275	7	8	13	10	23	45	38	26	36	29	10	30	—
Typhoid fever	425	37	31	37	29	21	39	33	41	35	32	33	57	—
Typhus fever														
Flea-borne (endemic, murine)	58	1	2	1	3	3	6	9	6	8	6	6	7	—
Tick-borne (Rocky Mountain spotted)	976	8	—	4	23	132	202	254	144	99	68	20	21	1

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[1] Includes wound and unspecified botulism

[2] Civilian cases only

NOTIFIABLE DISEASES—Reported cases, by geographic division and area, United States, 1982

Area	Tot. Resident Population (in thousands)	Amebiasis	Aseptic Meningitis	Botulism				Brucellosis	Chancro
				Foodborne	Infant	Wound	Unsp.		
United States	**231,534**	**7,307**	**9,680**	**33**	**61**	**2**	**1**	**173**	**1,3**
New England	**12,493**	**57**	**552**	**2**	—	—	—	**3**	
Maine	1,133	2	42	—	—	—	—	—	
N.H.	951	—	65	—	—	—	—	—	
Vt.	516	9	6	—	—	—	—	—	
Mass.	5,781	1	284	1	—	—	—	—	
R.I.	958	1	71	—	—	—	—	—	
Conn.	3,153	44	84	1	—	—	—	3	
Mid. Atlantic	**36,963**	**2,283**	**1,110**	—	**10**	—	**1**	**5**	**50**
N.Y. (excl. NYC)	17,659[2]	57	366	—	2	—	—	3	—
N.Y.C.	NA	2,176	192	—	—	—	1	—	50
N.J.	7,438	17	310	—	—	—	—	—	
Pa.	11,865	33	242	—	8	—	—	2	—
E.N. Central	**41,586**	**207**	**1,593**	**1**	**3**	—	—	**9**	**7**
Ohio	10,791	47	449	—	2	—	—	—	—
Ind.	5,471	17	170	—	—	—	—	2	
Ill.	11,448	111	318	—	1	—	—	6	4
Mich.	9,109	17	512	—	—	—	—	1	2
Wis.	4,765	15	144	1	—	—	—	—	
W.N. Central	**17,342**	**158**	**505**	**1**	**1**	—	—	**19**	—
Minn.	4,133	45	80	—	—	—	—	2	—
Iowa	2,905	76	102	—	—	—	—	5	—
Mo.	4,951	11	156	—	—	—	—	4	—
N. Dak.	670	—	16	1	—	—	—	2	—
S. Dak.	691	—	8	—	—	—	—	1	—
Nebr.	1,586	2	56	—	—	—	—	2	—
Kans.	2,408	24	87	—	1	—	—	3	—
S. Atlantic	**38,213**	**674**	**1,794**	**1**	**4**	—	—	**31**	**485**
Del.	602	—	3	—	2	—	—	—	—
Md.	4,265	7	119	—	1	—	—	—	2
D.C.	631	2	13	—	—	—	—	—	3
Va.	5,491	68	262	—	—	—	—	10	8
W. Va.	1,948	2	47	1	—	—	—	1	—
N.C.	6,019	15	300	—	—	—	—	—	54
S.C.	3,203	281	58	—	—	—	—	2	2
Ga.	5,639	249	119	—	—	—	—	4	221
Fla.	10,416	50	873	—	1	—	—	14	195
E.S. Central	**14,812**	**18**	**579**	—	—	—	—	**16**	**2**
Ky.	3,667	13	86	—	—	—	—	1	—
Tenn.	4,651	NN	130	—	—	—	—	9	2
Ala.	3,943	4	321	—	—	—	—	5	—
Miss.	2,551	1	42	—	—	—	—	1	—
W.S. Central	**25,111**	**516**	**1,176**	—	**1**	—	—	**55**	**1**
Ark.	2,291	6	32	—	—	—	—	7	—
La.	4,362	5	143	—	—	—	—	13	—
Okla.	3,177	12	216	—	—	—	—	8	—
Tex.	15,280	493	785	—	1	—	—	27	1
Mountain	**11,967**	**110**	**422**	**4**	**6**	—	—	**3**	**3**
Mont.	801	6	8	—	—	—	—	2	—
Idaho	965	7	42	—	—	—	—	1	—
Wyo.	502	1	10	1	—	—	—	—	—
Colo.	3,045	44	118	1	1	—	—	—	—
N. Mex.	1,359	3	16	—	—	—	—	—	—
Ariz.	2,860	35	33	—	—	—	—	—	3
Utah	1,554	13	156	2	5	—	—	—	—
Nev.	881	1	39	—	—	—	—	—	—
Pacific	**33,049**	**3,284**	**1,949**	**24**	**36**	**2**	—	**32**	**327**
Wash.	4,245	59	153	4	1	—	—	1	2
Oreg.	2,649	86	46	3	2	—	—	—	2
Calif.	24,724	3,106	1,383	15	29	2	—	30	323
Alaska	438	NN	137	2	—	—	—	1	—
Hawaii	994	33	230	—	4	—	—	—	—
Guam	NA	1	2	—	—	—	—	—	—
P.R.	NA	—	43	—	—	—	—	—	26
V.I.	NA	—	3	—	—	—	—	—	—
Pac. Trust Terr.	NA	757	2	NN	NN	NN	NN	NN	NA
C.N.M.I.	NA	—	—	NN	NN	NN	NN	NN	NA

[1] Civilian cases only

[2] Popuation estimate includes New York City

Note: There were no cases of anthrax reported for 1982

NOTIFIABLE DISEASES—Reported cases, by geographic division and area, United States, 1982 (continued)

Area	Chickenpox	Cholera	Diptheria	Encephalitis			Gonorrhea	Granuloma inguinale
				Primary	Indeterminate	Post childhood inf.		
United States	**167,423**	—	**2**	**374**	**1,090**	**36**	**960,633**[1]	**17**[1]
New England	**25,519**	—	—	**11**	**48**	**6**	**23,078**	—
Maine	5,121	—	—	—	—	—	1,165	—
N.H.	1,458	—	—	—	8	—	747	—
Vt.	NN	—	—	—	—	—	417	—
Mass.	8,238	—	—	5	21	—	10,386	—
R.I.	3,320	—	—	—	1	—	1,580	—
Conn.	7,382	—	—	6	18	6	8,783	—
Mid. Atlantic	**8,790**	—	—	**15**	**140**	**5**	**120,731**	**4**
N.Y. (excl. N.Y.C.)	5,049	—	—	12	64	—	20,601	—
N.Y.C.	3,382	—	—	—	—	—	48,210	3
N.J.	NN	—	—	3	23	3	22,298	1
Pa.	359	—	—	—	53	2	29,622	—
E.N. Central	**81,780**	—	**1**	**137**	**332**	**9**	**137,424**	**1**
Ohio	7,719	—	—	43	105	3	35,967	—
Ind.	7,795	—	—	20	74	4	16,060	—
Ill.	19,159	—	—	19	52	—	40,607	1
Mich.	27,879	—	—	—	69	—	32,848	—
Wis.	19,238	—	1	55	32	2	11,942	—
W.N. Central	**16,986**	—	—	**18**	**116**	**2**	**43,887**	—
Minn.	53	—	—	6	54	1	6,415	—
Iowa	7,175	—	—	10	37	1	4,850	—
Mo.	637	—	—	—	19	—	20,628	—
N. Dak.	764	—	—	—	—	—	558	—
S. Dak.	271	—	—	—	1	—	1,122	—
Nebr.	NA	—	—	1	4	—	2,653	—
Kans.	8,086	—	—	1	1	—	7,661	—
S. Atlantic	**10,769**	—	—	**72**	**122**	**3**	**253,231**	**7**
Del.	302	—	—	—	1	—	4,168	—
Md.	2,614	—	—	6	14	2	32,269	—
D.C.	22	—	—	—	—	—	15,018	—
Va.	924	—	—	—	43	—	21,103	3
W. Va.	6,417	—	—	—	16	—	2,610	—
N.C.	NN	—	—	11	26	1	39,687	1
S.C.	NN	—	—	3	2	—	24,018	—
Ga.	490	—	—	17	—	—	51,652	—
Fla.	NN	—	—	35	20	—	62,706	3
E.S. Central	**2,973**	—	—	**21**	**26**	**2**	**82,398**	—
Ky.	2,660	—	—	1	2	—	11,027	—
Tenn.	NN	—	—	3	—	—	32,444	—
Ala.	NN	—	—	8	13	1	24,497	—
Miss.	313	—	—	9	11	1	14,430	—
W.S. Central	**11,104**	—	**1**	**49**	**145**	**3**	**131,363**	—
Ark.	54	—	—	4	—	—	10,322	—
La.	NN	—	—	11	24	—	24,932	—
Okla.	NN	—	—	8	34	2	14,529	—
Tex.	11,050	—	1	26	87	1	81,580	—
Mountain	**866**	—	—	**21**	**27**	—	**33,677**	**1**
Mont.	NN	—	—	3	—	—	1,321	—
Idaho	NN	—	—	—	1	—	1,524	—
Wyo.	102	—	—	—	—	—	959	—
Colo.	NN	—	—	10	10	—	9,525	—
N. Mex.	NN	—	—	—	1	—	4,373	—
Ariz.	182	—	—	6	10	—	8,973	1
Utah	217	—	—	2	—	—	1,584	—
Nev.	365	—	—	—	5	—	5,418	—
Pacific	**8,626**	—	—	**30**	**134**	**6**	**134,844**	**4**
Wash.	6,086	—	—	4	11	—	11,381	—
Oreg.	NN	—	—	—	4	—	7,791	—
Calif.	1,262	—	—	24	90	6	109,464	4
Alaska	458	—	—	—	11	—	3,449	—
Hawaii	820	—	—	2	18	—	2,759	—
Guam	144	1	—	—	1	—	106	—
P.R.	840	—	—	—	—	—	2,644	—
V.I.	34	—	—	—	—	—	—	—
Pac. Trust Terr.	186	779	—	NA	NA	NA	NA	NA
C.N.M.I.	29	—	—	NA	NA	NA	NA	NA

[1] Civilian cases only

NOTIFIABLE DISEASES—Reported cases, by geographic division and area, United States, 1982 (continued)

Area	Hepatitis A	Hepatitis B	Hepatitis non-A non-B	Hepatitis unsp.	Legionellosis	Leprosy		Leptospirosis	Lymphogranuloma venereum
						Endemic	Imported		
United States	23,403	22,177	2,620	8,564	654	17	233	100	238[1]
New England	538	1,338	83	263	96	—	2	4	2
Maine	41	57	2	4	5	—	—	2	—
N.H.	28	43	8	11	5	—	—	—	—
Vt.	53	20	11	3	9	—	—	—	—
Mass.	211	535	24	194	23	—	—	—	2
R.I.	87	114	5	1	—	—	—	—	—
Conn.	118	569	33	50	54	—	2	2	—
Mid. Atlantic	3,259	4,022	230	878	133	—	38	6	85
N.Y. (excl. NYC)	564[2]	805[2]	88	153[2]	11	—	3	2	—
N.Y.C.	689[2]	1,117[2]	—	174[2]	10	—	28	—	82
N.J.	718	1,094	142	281	34	—	3	1	3
Pa.	1,288	1,006	NA	270	78	—	3	3	—
E.N. Central	3,080	2,868	183	771	192	—	14	4	2
Ohio	774	777	40	226	90	—	—	3	—
Ind.	656	401	32	262	51	—	—	—	2
Ill.	601	690	88	96	24	—	12	1	—
Mich.	727	851	NA	167	—	—	—	—	—
Wis.	322	149	23	20	27	—	2	—	—
W.N. Central	829	736	106	174	54	—	7	8	3
Minn.	235	123	34	15	5	—	3	—	—
Iowa	79	94	17	30	24	—	—	1	—
Mo.	204	287	24	95	11	—	2	6	2
N. Dak.	4	7	2	5	1	—	—	—	—
S. Dak.	14	17	—	1	—	—	1	—	—
Nebr.	34	87	5	12	7	—	1	—	—
Kans.	259	110	24	16	6	—	—	1	1
S. Atlantic	2,495	4,634	535	1,097	93	—	13	8	111
Del.	46	118	8	29	2	—	—	—	—
Md.	177	764	98	124	13	—	3	—	1
D.C.	17	134	5	15	—	—	—	—	—
Va.	189	507	87	104	29	—	1	1	4
W. Va.	91	87	12	9	—	—	—	—	—
N.C.	150	381	NN	162	9	—	—	—	7
S.C.	316	466	26	86	1	—	—	—	—
Ga.	387	820	41	91	11	—	1	—	75
Fla.	1,122	1,357	258	477	28	—	8	7	24
E.S. Central	947	1,264	154	138	11	—	—	2	1
Ky.	336	190	14	34	1	—	—	—	—
Tenn.	346	589	77	47	NN	—	—	—	1
Ala.	128	381	63	57	9	—	—	2	—
Miss.	137	104	—	—	1	—	—	—	—
W.S. Central	4,900	1,866	92	2,854	19	15	14	28	1
Ark.	81	116	26	205	6	—	—	3	—
La.	781	349	27	288	—	—	—	7	—
Okla.	812	358	39	290	13	—	—	—	—
Tex.	3,226	1,043	NN	2,071	NN	15	14	18	1
Mountain	1,961	834	208	627	40	—	2	—	4
Mont.	42	15	2	6	5	—	—	—	—
Idaho	63	18	9	3	4	—	1	—	—
Wyo.	68	12	6	23	2	—	—	—	—
Colo.	347	197	30	84	6	—	—	—	—
N. Mex.	445	52	40	44	2	—	—	—	—
Ariz.	627	269	63	267	10	—	—	—	4
Utah	187	84	28	106	8	—	1	—	—
Nev.	182	187	30	94	3	—	—	—	—
Pacific	6,394	4,616	1,038	1,762	16	2	143	40	26
Wash.	494	358	94	95	14	—	15	6	—
Oreg.	377	295	75	24	1	—	3	4	—
Calif.	4,422	3,816	858	1,631	NN	—	77	1	26
Alaska	20	60	2	2	NN	—	1	NN	—
Hawaii	81	87	9	10	1	2	47	29	—
Guam	2	6	—	10	—	1	—	—	—
P.R.	279	316	—	237	—	2	—	5	9
V.I.	4	9	—	2	—	—	—	—	—
Pac. Trust. Terr.	1	—	—	71	NN	—	—	—	NA
C.N.M.I.	—	—	—	—	—	—	—	—	NA

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[1] Civilian cases only.

[2] Classifications based on HBsAg test results.

NOTIFIABLE DISEASES—Reported cases, by geographic division and area, United States, 1982 (continued)

Area	Malaria	Measles	Meningococcal infections	Mumps	Pertussis	Plague	Poliomyelitis		Psittacosis
							Total	Paralytic	
United States	**1,056**[1]	**1,714**	**3,086**	**5,270**	**1,895**	**19**	**8**	**8**	**162**
New England	**52**	**15**	**179**	**189**	**66**	—	—	—	**11**
Maine	—	—	17	42	4	—	—	—	—
N.H.	2	3	21	16	12	—	—	—	—
Vt.	—	2	13	7	2	—	—	—	1
Mass.	29	4	55	75	32	—	—	—	7
R.I.	3	—	16	18	11	—	—	—	—
Conn.	18	6	57	29	5	—	—	—	3
Mid. Atlantic	**180**	**174**	**541**	**364**	**605**	—	**1**	**1**	**14**
N.Y. (excl. NYC)	33	112	179	100	322	—	—	—	3
N.Y.C.	70	45	104	47	53	—	1	1	3
N.J.	39	6	112	57	26	—	—	—	7
Pa.	38	7	146	160	204	—	—	—	1
E.N. Central	**107**	**89**	**467**	**2,680**	**370**	—	**2**	**2**	**9**
Ohio	16	1	134	1,775	98	—	—	—	2
Ind.	7	2	48	48	35	—	2	2	1
Ill.	42	24	131	315	164	—	—	—	2
Mich.	29	62	81	410	32	—	—	—	1
Wis.	13	—	73	132	41	—	—	—	3
W.N. Central	**31**	**49**	**148**	**646**	**81**	—	**1**	**1**	**15**
Minn.	4	—	36	455	34	—	—	—	9
Iowa	8	—	13	65	9	—	1	1	1
Mo.	10	2	40	13	17	—	—	—	5
N. Dak.	2	—	6	—	—	—	—	—	—
S. Dak.	—	—	11	1	6	—	—	—	—
Nebr.	4	3	15	1	1	—	—	—	—
Kans.	3	44	27	111	14	—	—	—	—
S. Atlantic	**142**	**271**	**615**	**286**	**302**	—	—	—	**5**
Del.	4	—	—	13	9	—	—	—	—
Md.	18	5	44	34	80	—	—	—	—
D.C.	6	1	5	—	—	—	—	—	—
Va.	41	14	72	44	29	—	—	—	—
W. Va.	7	3	10	124	15	—	—	—	—
N.C.	9	2	114	23	51	—	—	—	—
S.C.	4	—	70	18	16	—	—	—	1
Ga.	18	—	118	30	43	—	—	—	1
Fla.	35	246	182	NN	59	—	—	—	3
E.S. Central	**19**	**15**	**175**	**68**	**54**	—	—	—	**2**
Ky.	5	1	25	22	7	—	—	—	—
Tenn.	8	6	79	25	26	—	—	—	1
Ala.	2	2	56	10	5	—	—	—	1
Miss.	4	6	15	11	16	—	—	—	—
W.S. Central	**76**	**175**	**357**	**270**	**119**	**1**	—	—	**10**
Ark.	4	—	17	9	7	—	—	—	—
La.	9	16	67	6	24	—	—	—	1
Okla.	8	30	35	NN	9	—	—	—	1
Texas	55	129	238	255	79	1	—	—	8
Mountain	**42**	**29**	**123**	**132**	**92**	**17**	**1**	**1**	**30**
Mont.	1	—	8	8	1	—	—	—	NN
Idaho	2	—	7	5	12	—	1	1	3
Wyo.	—	1	6	2	4	1	—	—	—
Colo.	19	8	51	22	36	2	—	—	19
N. Mex.	3	—	15	NN	8	9	—	—	—
Ariz.	13	17	21	63	27	4	—	—	6
Utah	4	3	12	24	4	1	—	—	2
Nev.	—	—	3	8	—	—	—	—	—
Pacific	**407**	**897**	**451**	**636**	**206**	**1**	**3**	**3**	**56**
Wash.	24	42	56	102	36	—	1	1	9
Oreg.	15	17	85	NN	27	1	—	—	19
Calif.	360	831	292	496	115	—	2	2	27
Alaska	1	1	13	16	—	—	—	—	—
Hawaii	7	6	5	21	28	—	—	—	1
Guam	2	9	2	5	—	—	—	—	—
P.R.	4	224	13	103	22	—	—	—	—
V.I.	—	2	2	4	—	—	—	—	—
Pac. Trust Terr.	—	1	—	3	—	—	—	—	NN
C.N.M.I.	—	—	—	1	—	—	—	—	NN

[1] Includes 1,041 imported cases.

NOTIFIABLE DISEASES—Reported cases, by geographic division and area, United States, 1982 (continued)

Area	Rabies[1]	Rheumatic fever, acute	Rubella		Salmonellosis	Shigellosis	Syphilis	
	Animal		Rubella	Cong. syndrome			Primary & secondary	All stages
United States	**6,212**	**137**	**2,325**	**7**	**40,936**	**18,129**	**33,613[2]**	**75,579[2]**
New England	**39**	**35**	**22**	—	**4,048**	**1,352**	**600**	**1,720**
Maine	22	—	—	—	380	24	8	37
N.H.	1	—	13	—	225	13	2	3
Vt.	2	1	—	—	72	9	8	14
Mass.	9	NN	2	—	2,257	298	403	979
R.I.	—	34	1	—	208	55	27	118
Conn.	5	—	6	—	906	955	152	569
Mid. Atlantic	**204**	—	**111**	—	**6,765**	**2,314**	**4,433**	**12,209**
N.Y. (excl. NYC)	113	NN	55	—	1,315	420	477	1,266
N.Y.C.	-	NN	36	NN	1,753	684	2,580	7,295
N.J.	16	NN	18	—	1,767	599	658	1,920
Pa.	75	NN	2	—	1,930	611	718	1,728
E.N. Central	**651**	**13**	**221**	**3**	**6,014**	**1,909**	**1,988**	**6,004**
Ohio	81	8	4	—	899	195	334	916
Ind.	76	—	31	—	591	117	186	468
Ill.	294	3	87	2	2,357	1,250	1,054	3,419
Mich.	7	—	57	1	1,186	188	311	921
Wis.	193	2	42	—	981	159	103	280
W.N. Central	**1,209**	**13**	**67**	—	**2,772**	**782**	**586**	**1,917**
Minn.	224	NN	7	—	825	73	153	315
Iowa	377	3	—	—	333	69	35	114
Mo.	123	2	38	—	571	67	300	1,079
N. Dak.	97	4	—	—	235	31	7	13
S. Dak.	115	1	1	—	103	114	6	18
Nebr.	126	NN	—	—	154	290	16	51
Kans.	147	3	21	—	551	138	69	327
S. Atlantic	**1,392**	**22**	**104**	—	**9,112**	**1,713**	**8,905**	**19,484**
Del.	2	3	1	—	148	9	24	67
Md.	153	NN	36	—	1,257	144	494	1,310
D.C.	5	—	—	—	177	43	462	1,278
Va.	745	NN	12	—	1,468	159	647	1,618
W. Va.	62	1	3	—	178	40	35	603
N.C.	66	NN	2	—	1,130	269	725	1,750
S.C.	66	NN	—	NN	672	136	563	1,138
Ga.	213	5	18	—	1,445	328	1,806	3,784
Fla.	80	13	32	—	2,637	585	4,149	7,936
E.S. Central	**649**	**6**	**49**	—	**1,649**	**356**	**2,261**	**4,502**
Ky.	134	6	31	—	329	43	132	427
Tenn.	356	NN	2	—	455	155	665	1,303
Ala.	146	NN	—	—	543	84	835	1,497
Miss.	13	—	16	—	322	74	629	1,275
W.S. Central	**1,162**	**12**	**126**	—	**3,749**	**2,760**	**8,602**	**15,875**
Ark.	157	—	2	—	532	47	216	465
La.	32	—	1	—	226	114	1,855	3,659
Okla.	189	NN	3	—	485	426	192	568
Tex.	784	12	120	—	2,506	2,173	6,339	11,183
Mountain	**288**	**21**	**106**	**2**	**1,599**	**1,859**	**821**	**1,691**
Mont.	97	—	7	—	190	50	6	20
Idaho	11	NN	7	—	114	106	26	46
Wyo.	27	3	8	—	32	8	15	34
Colo.	47	3	6	—	413	416	250	500
N. Mex.	22	14	6	—	259	351	206	378
Ariz.	60	—	29	2	404	740	206	456
Utah	18	1	31	—	94	144	24	61
Nev.	6	—	12	—	93	44	88	196
Pacific	**619**	**15**	**1,519**	**2**	**5,228**	**5,084**	**5,427**	**12,177**
Wash.	8	—	58	—	749	284	172	523
Oreg.	15	NN	10	—	348	269	111	216
Calif.	517	12	1,437	2	3,552	4,407	5,025	11,222
Alaska	69	3	5	—	84	29	18	54
Hawaii	—	NN	9	—	495	95	101	162
Guam	-	—	2	—	166	49	—	13
P.R.	68	—	13	—	307	100	766	1,723
V.I.	—	—	2	—	3	8	—	—
Pac. Trust Terr.	—	2	—	NN	—	—	—	—
C.N.M.I.	—	—	—	NN	10	8	—	—

[1] No cases of human rabies were reported for 1982.
[2] Civilian cases only.

NOTIFIABLE DISEASES—Reported cases, by geographic division and area, United States, 1982 (continued)

Area	Tetanus	Trichinosis	Tuberculosis	Tularemia	Typhoid fever			Typhus fever	
					Cases		Carriers	Murine	Rocky Mt. Spotted
					Endemic	Imported			
United States	**88**	**115**	**25,520**	**275**	**197**	**228**	**60**	**58**	**976**
New England	—	**16**	**795**	**8**	**7**	**10**	**2**	—	**11**
Maine	—	—	57	—	—	—	—	—	—
N.H.	—	2	33	—	—	—	2	—	—
Vt.	—	4	13	1	—	2	—	—	—
Mass.	—	6	503	7	7	6	—	—	6
R.I.	—	3	34	—	—	—	—	—	2
Conn.	—	1	155	—	—	2	—	—	3
Mid. Atlantic	**7**	**42**	**4,152**	**9**	**21**	**51**	**3**	—	**62**
N.Y. (excl. NYC)	2	3	674	8	1	10	—	—	15
N.Y.C.	4	6	1,594	—	11	26	—	—	3
N.J.	—	23	804	—	3	11	2	—	14
Pa.	1	10	1,080	1	6	4	1	—	20
E.N. Central	**8**	**11**	**3,745**	**2**	**21**	**24**	**3**	**1**	**74**
Ohio	2	3	621	—	1	5	—	—	41
Ind.	1	—	399	—	4	—	—	—	16
Ill.	2	6	1,653	1	9	3	3	1	15
Mich.	1	1	864	—	7	7	—	—	1
Wis.	2	1	208	1	—	9	—	—	1
W.N. Central	**13**	**3**	**796**	**42**	**6**	**11**	**3**	—	**36**
Minn.	6	NN	157	—	—	9	2	—	4
Iowa	5	—	73	4	—	1	—	—	4
Mo.	1	3	390	27	4	—	—	—	10
N. Dak.	—	—	16	—	—	—	—	—	—
S. Dak.	—	—	36	1	—	—	—	—	4
Nebr.	1	—	32	4	—	1	1	—	3
Kans.	—	—	92	6	2	—	—	—	11
S. Atlantic	**16**	**16**	**5,273**	**17**	**33**	**19**	**9**	**3**	**515**
Del.	—	1	55	—	—	—	—	—	—
Md.	2	7	540	5	—	12	7	—	37
D.C.	1	—	228	—	—	—	—	—	—
Va.	2	—	672	5	2	2	2	—	74
W. Va.	3	2	162	—	—	5	—	—	9
N.C.	1	1	806	—	4	—	—	—	227
S.C.	1	NN	513	6	3	—	NN	—	106
Ga.	4	4	830	—	3	—	—	1	54
Fla.	2	1	1,467	1	21	—	NN	2	8
E.S. Central	**10**	**1**	**2,316**	**11**	**31**	**4**	**6**	**4**	**103**
Ky.	1	—	605	1	5	—	—	—	1
Tenn.	1	1	747	6	4	1	2	1	59
Ala.	6	—	631	—	7	3	3	1	19
Miss.	2	—	333	4	15	—	—	2	24
W.S. Central	**19**	**3**	**3,263**	**134**	**32**	**23**	**2**	**41**	**164**
Ark.	3	—	412	78	6	—	1	—	21
La.	7	1	471	4	4	—	—	—	2
Okla.	1	—	335	36	—	3	—	—	77
Tex.	8	2	2,045	16	22	20	1	41	64
Mountain	**2**	**11**	**731**	**41**	**7**	**7**	—	—	**15**
Mont.	—	—	37	6	—	—	—	—	5
Idaho	—	4	31	1	—	—	—	—	4
Wyo.	—	—	10	5	—	—	—	—	1
Colo.	—	3	113	9	—	3	—	—	2
N. Mex.	1	—	122	5	—	—	—	—	1
Ariz.	—	2	300	1	5	3	—	—	—
Utah	—	1	51	13	1	1	—	—	—
Nev.	1	1	67	1	1	—	—	—	2
Pacific	**13**	**12**	**4,449**	**11**	**39**	**79**	**33**	**9**	**6**
Wash.	—	—	301	1	5	5	1	—	—
Oreg.	1	2	194	3	—	4	—	—	1
Calif.	12	4	3,606	6	32	67	31	—	5
Alaska	—	1	96	1	—	1	—	—	—
Hawaii	—	5	252	—	2	2	1	9	NN
Guam	1	—	49	—	—	—	—	—	—
P.R.	6	—	473	—	4	—	—	—	—
V.I.	—	—	—	—	—	—	—	—	—
Pac. Trust Terr.	—	NN	209	NN	25	—	NA	—	—
C.N.M.I.	—	NN	75	NN	—	—	NA	—	—

NOTIFIABLE DISEASES — Summary of reported cases, by age group, United States, 1982

Disease	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Age not stated
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	2	—	—	1	—	—	—	1	—	—	—	—	—
Encephalitis, primary	374	23	55	66	52	22	30		21	22	25	42	16
Indeterminate	1,090	63	118	146	125	112	174		114	46	53	118	21
Post-childhood infections	36	—	6	9	6	1	6		3	—	2	3	—
Gonorrhea	960,633[1]	10,453				235,086	363,135	195,037	121,208	25,972	9,742		—
Hepatitis A	23,403	63	1,017	2,447	1,912	2,370	3,964	3,755	3,433	1,319[2]	960[2]	1,114	934
Hepatitis B	22,177	64	97	120	193	1,977	5,244	4,516	4,294	1,753	1,439	1,431	1,049
Hepatitis non-A non-B	2,629	8	24	42	55	189	438	467	488	189[1]	228[1]	317[1]	154
Hepatitis, unspecified	8,564	29	268	653	498	895	1,654	1,436	1,270	481[2]	350[2]	542[2]	447
Measles (rubeola)	1,714	118	371	326	402	279	92	51	42	11	3	2	17
Meningococcal infections, total	3,056	702	810	201	150	242	169	92	145	110[2]	111[2]	221[2]	91
Military	18	—	—	—	—	10	6	—	1	—	—	—	1
Civilian	3,038	702	810	201	150	232	163	92	144	110[2]	111[2]	221[2]	90
Mumps	5,270	27	339	1,058	1,523	611	85	85	102	40[2]	15[2]	18[2]	1,357
Pertussis (whooping cough)	1,895	980	474	181	88	35	24	22	29	9[2]	2[2]	2[2]	80
Plague	19	—	1	3	3	2	4	1	1	1	1	2	—
Poliomyelitis, total	8	2	2	—	—	—	2	—	—	1	1	—	—
Paralytic	8	2	2	—	—	—	2	—	—	1	1	—	—
Rubella (German measles)	2,325	177	249	214	155	288	375	298	213	85	25	4	242
Salmonellosis	40,936	7,272	6,629	2,455	1,767	1,936	2,613	2,207	2,793	1,607[2]	1,536[2]	3,584[2]	6,170
Shigellosis	18,129	785	5,286	2,516	928	670	1,198	1,283	1,409	525[2]	326[2]	550[2]	2,850
Syphilis, primary & secondary	33,613[1]	238				4,517	9,461	7,813	7,775	2,734	1,075		—
Tetanus	88	2	1	—	—	—	3	6	5	8	8	54	1
Tuberculosis	25,520	789		322	238	560	1,407	21,743					461
Typhoid fever	425	4	47	45	40	38	55	47	55	31	14	42	7

[1] Civilian cases only

[2] Variation in reporting occurs in the age groups over 40 years in the state of Illinois. For example, in the table on page 43 the state of Illinois reported 41 cases of hepatitis, unspecified, for ages 40+. Therefore, the U.S. totals for the 3 age groups (40-49, 50-59, and 60+) do not include these cases. See age tables in Part 2 for each disease where this footnote appears.

Estimates of the resident population of the United States, by age, race, and sex*
July 1, 1982

Age	Total			White			Black and other races			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Ages	**231,534**	**112,498**	**119,036**	**198,108**	**96,589**	**101,518**	**33,426**	**15,909**	**17,517**	**27,689**	**13,045**	**14,644**
<1	3,642	1,864	1,778	2,912	1,494	1,418	730	369	361	601	303	297
1-4	13,730	7,023	6,707	11,163	5,727	5,435	2,567	1,295	1,272	2,116	1,066	1,050
5-9	15,956	8,161	7,796	13,054	6,694	6,360	2,903	1,467	1,436	2,393	1,207	1,186
10-14	18,024	9,214	8,811	14,865	7,618	7,247	3,159	1,596	1,563	2,644	1,331	1,313
15-19	19,793	10,084	9,708	16,382	8,364	8,018	3,411	1,721	1,690	2,900	1,454	1,445
20-24	21,715	10,906	10,810	18,273	9,222	9,052	3,442	1,684	1,758	2,895	1,406	1,489
25-29	20,657	10,298	10,359	17,547	8,826	8,721	3,111	1,473	1,638	2,536	1,195	1,340
30-34	18,644	9,234	9,410	15,930	7,972	7,958	2,714	1,262	1,452	2,144	994	1,150
35-39	15,638	7,701	7,937	13,588	6,758	6,831	2,049	943	1,106	1,603	731	871
40-44	12,441	6,095	6,346	10,764	5,324	5,440	1,677	771	906	1,330	601	730
45-49	11,044	5,367	5,676	9,591	4,707	4,884	1,453	661	792	1,174	528	646
50-54	11,330	5,453	5,877	9,989	4,855	5,134	1,341	598	743	1,102	490	612
55-59	11,521	5,429	6,092	10,256	4,867	5,389	1,266	562	703	1,060	468	592
60+	37,397	15,670	21,727	33,794	14,163	19,632	3,603	1,507	2,096	3,093	1,271	1,822
Median age, years	30.6	29.4	31.9	31.5	30.2	32.8	25.8	24.5	27.1	25.5	24.1	26.8

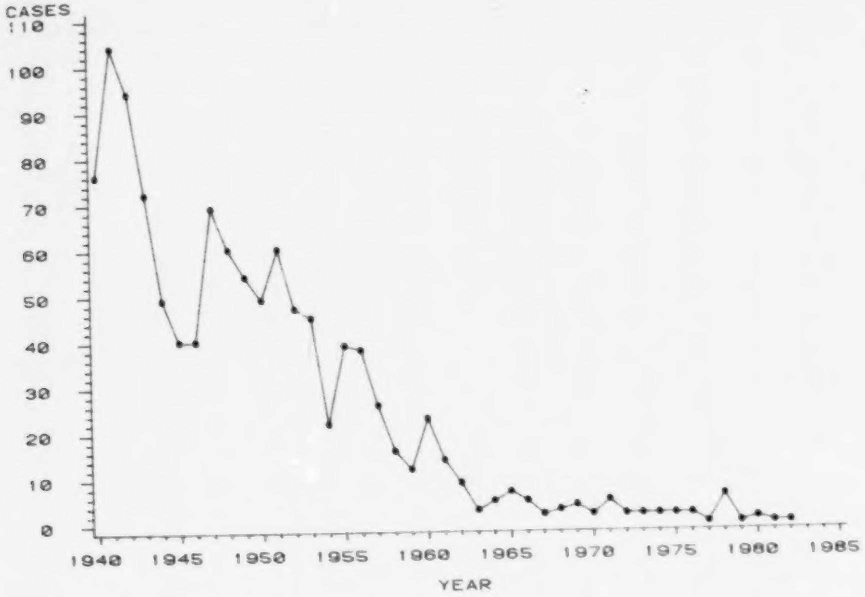
*Numbers in thousands

Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 929, *Estimates of the Population of the United States, by Age, Sex, and Race, 1980-1982*

PART 2:

Statistical Tables, Graphs, Maps, and Narratives for Notifiable Diseases in the United States

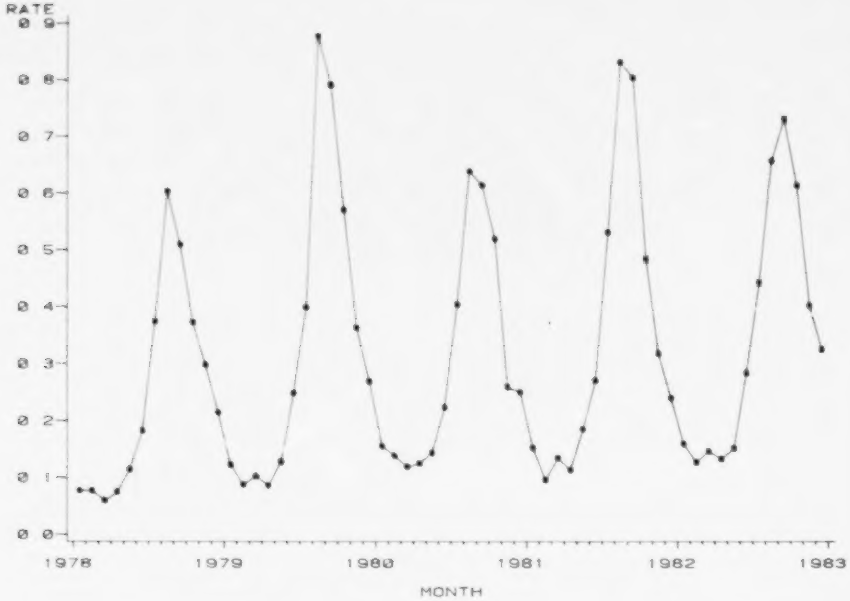
ANTHRAX — Reported cases in humans, by year, United States, 1940-1982



Ongoing immunization programs for high-risk occupational groups, improved industrial hygiene, and decreasing contact with contaminated animal materials have resulted in an extremely low occurrence of anthrax for the past 20 years. No cases were reported in 1981 or 1982.

ASEPTIC MENINGITIS

ASEPTIC MENINGITIS — Reported cases per 100,000 population, by month, United States, 1978-1982



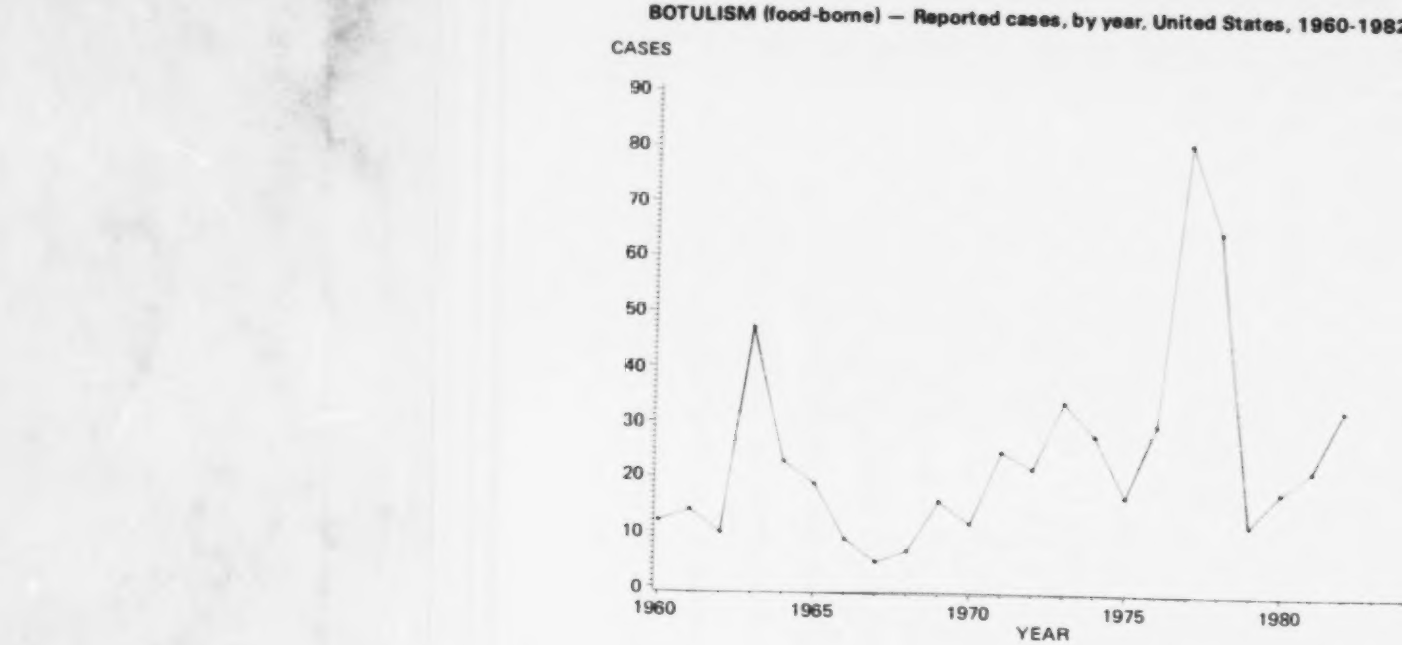
There has been essentially no change in the incidence or pattern of aseptic meningitis in the past 5 years. Yearly peak incidences occurred in either August or September. From surveillance of enterovirus isolation, the two most common types from cases of aseptic meningitis by year were: 1978, echoviruses 9 and 4; 1979, echoviruses 7 and 11; 1980, echovirus 11 and Coxsackie B3; 1981, echoviruses 30 and 9; 1982, echoviruses 30 and 11.

ASEPTIC MENINGITIS — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**9,680**	**368**	**294**	**338**	**307**	**351**	**657**	**1,023**	**1,520**	**1,691**	**1,421**	**930**	**753**	**27**
New England	**552**	**14**	**16**	**10**	**6**	**9**	**49**	**84**	**123**	**96**	**69**	**43**	**33**	-
Maine	42	-	4	1	-	1	3	5	6	8	7	4	3	-
N.H.	65	2	-	1	-	1	3	12	20	9	12	4	1	-
Vt.	6	-	-	-	-	-	1	1	1	-	-	-	3	-
Mass.	284	4	6	5	4	6	36	50	69	48	27	19	10	-
R.I.	71	2	3	1	-	-	3	13	11	17	9	6	6	-
Conn.	84	6	3	2	2	1	3	3	16	14	14	10	10	-
Mid Atlantic	**1,110**	**41**	**31**	**47**	**37**	**36**	**62**	**86**	**212**	**205**	**149**	**109**	**86**	**9**
N.Y. (excl. NYC)	366	8	9	9	4	8	25	22	77	66	50	49	39	-
N.Y.C.	192	18	6	10	12	10	6	4	25	26	21	29	25	-
N.J.	310	4	11	17	10	9	18	40	68	63	39	19	12	-
Pa.	242	11	5	11	11	9	13	20	42	50	39	12	10	9
E.N. Central	**1,593**	**65**	**30**	**29**	**34**	**37**	**61**	**143**	**301**	**320**	**296**	**179**	**98**	-
Ohio	449	-	5	10	9	6	19	32	77	99	90	60	42	-
Ind.	170	14	6	-	6	7	9	11	27	25	42	20	3	-
Ill.	318	32	7	2	9	15	12	42	64	62	42	13	18	-
Mich.	512	19	10	15	9	7	13	36	82	110	106	72	33	-
Wis.	144	-	2	2	1	2	8	22	51	24	16	14	2	-
W.N. Central	**505**	**35**	**4**	**13**	**6**	**10**	**24**	**57**	**75**	**113**	**68**	**50**	**50**	-
Minn.	80	5	1	4	-	4	3	8	8	10	8	-	29	-
Iowa	102	3	1	2	4	1	6	10	10	17	19	20	9	-
Mo.	156	21	1	3	-	4	8	6	23	50	21	14	5	-
N. Dak.	16	1	-	-	-	-	-	6	7	-	1	-	1	-
S. Dak.	8	1	-	-	-	-	-	2	1	2	-	1	1	-
Nebr.	56	1	-	2	-	-	3	6	9	11	13	8	3	-
Kans.	87	3	1	2	2	1	4	19	17	23	6	7	2	-
S. Atlantic	**1,794**	**52**	**62**	**71**	**77**	**81**	**144**	**262**	**256**	**276**	**229**	**164**	**102**	**18**
Del.	3	-	-	-	-	-	-	-	-	2	-	-	1	-
Md.	119	4	1	7	2	5	9	13	26	28	14	5	5	-
D.C.	13	-	-	2	1	-	-	-	1	3	3	3	-	-
Va.	262	4	13	7	6	7	6	32	33	44	58	37	15	-
W. Va.	47	3	2	2	1	-	-	2	4	15	7	10	1	-
N.C.	300	7	9	4	10	11	16	31	59	61	31	35	26	-
S.C.	58	-	-	2	2	7	3	14	8	6	9	4	3	-
Ga.	119	5	2	4	2	3	9	8	15	23	28	10	10	-
Fla.	873	29	35	43	53	48	101	162	110	94	79	60	41	18
E.S. Central	**579**	**30**	**26**	**26**	**17**	**27**	**25**	**36**	**69**	**57**	**143**	**59**	**64**	-
Ky.	86	1	13	3	2	4	2	1	8	24	11	1	16	-
Tenn.	130	13	4	5	7	7	4	9	12	16	20	17	16	-
Ala.	321	15	7	15	7	13	19	23	49	13	104	34	22	-
Miss.	42	1	2	3	1	3	-	3	-	4	8	7	10	-
W.S. Central	**1,176**	**25**	**33**	**36**	**37**	**51**	**102**	**145**	**199**	**195**	**158**	**86**	**109**	-
Ark.	32	-	3	-	1	-	1	5	11	6	4	1	-	-
La.	143	2	7	11	7	7	7	20	17	22	15	16	12	-
Okla.	216	4	3	3	8	4	15	29	13	63	32	24	18	-
Tex.	785	19	20	22	21	40	79	91	158	104	107	45	79	-
Mountain	**422**	**11**	**7**	**14**	**6**	**8**	**22**	**18**	**75**	**81**	**90**	**54**	**36**	-
Mont.	8	1	-	-	-	2	1	2	1	-	1	-	-	-
Idaho	42	-	-	-	-	-	1	-	7	19	5	5	5	-
Wyo.	10	-	-	-	-	1	-	1	2	2	2	2	-	-
Colo.	118	2	1	1	2	-	9	10	18	24	23	14	14	-
N. Mex.	16	1	-	2	-	1	-	1	3	2	4	1	1	-
Ariz.	33	2	2	2	1	1	1	1	3	3	5	-	12	-
Utah	156	3	-	3	1	3	7	2	33	27	46	27	4	-
Nev.	39	2	4	6	2	-	3	1	8	4	4	5	-	-
Pacific	**1,949**	**95**	**85**	**92**	**87**	**92**	**168**	**192**	**210**	**348**	**219**	**186**	**175**	-
Wash.	153	4	8	11	4	4	1	19	18	34	19	15	16	-
Oreg.	46	2	3	2	1	1	3	1	7	8	3	11	4	-
Calif.	1,383	74	49	63	54	69	131	123	141	238	161	134	146	-
Alaska	137	1	7	5	1	-	3	31	22	51	13	3	-	-
Hawaii	230	14	18	11	27	18	30	18	22	17	23	23	9	-
Guam	2	-	-	1	-	-	-	1	-	-	-	-	-	-
P.R.	43	2	1	1	6	-	5	4	6	6	1	2	9	-
V.I.	3	1	-	-	-	-	-	-	1	1	-	-	-	-
Pac. Trust Terr.	2	2	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

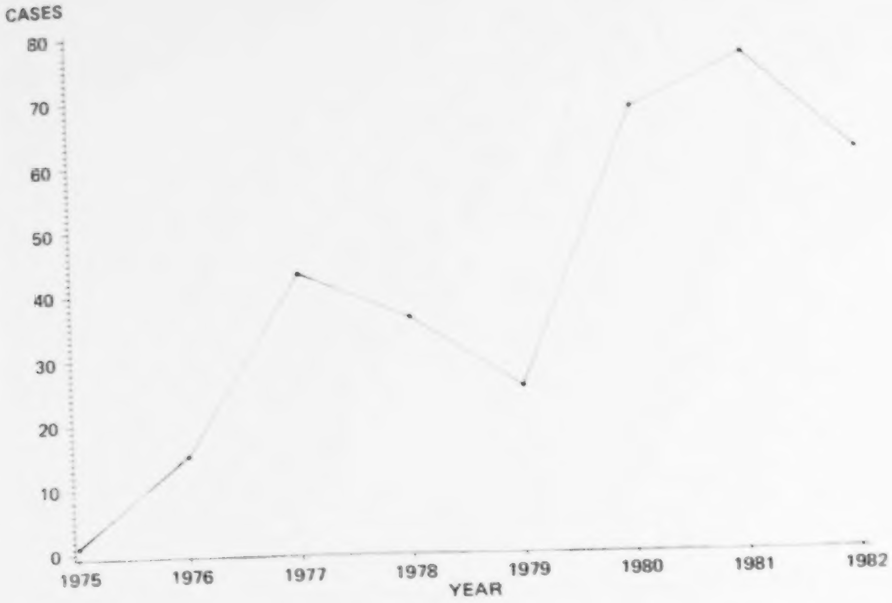
BOTULISM

BOTULISM (food-borne) — Reported cases, by year, United States, 1960-198



There were 21 outbreaks of food-borne botulism reported for 1982. In three outbre
commercial products were implicated; in the other 18 outbreaks, home-canned f
were implicated. Type A toxin was found in association with most cases, but ty
toxin was identified in specimens in a few instances.

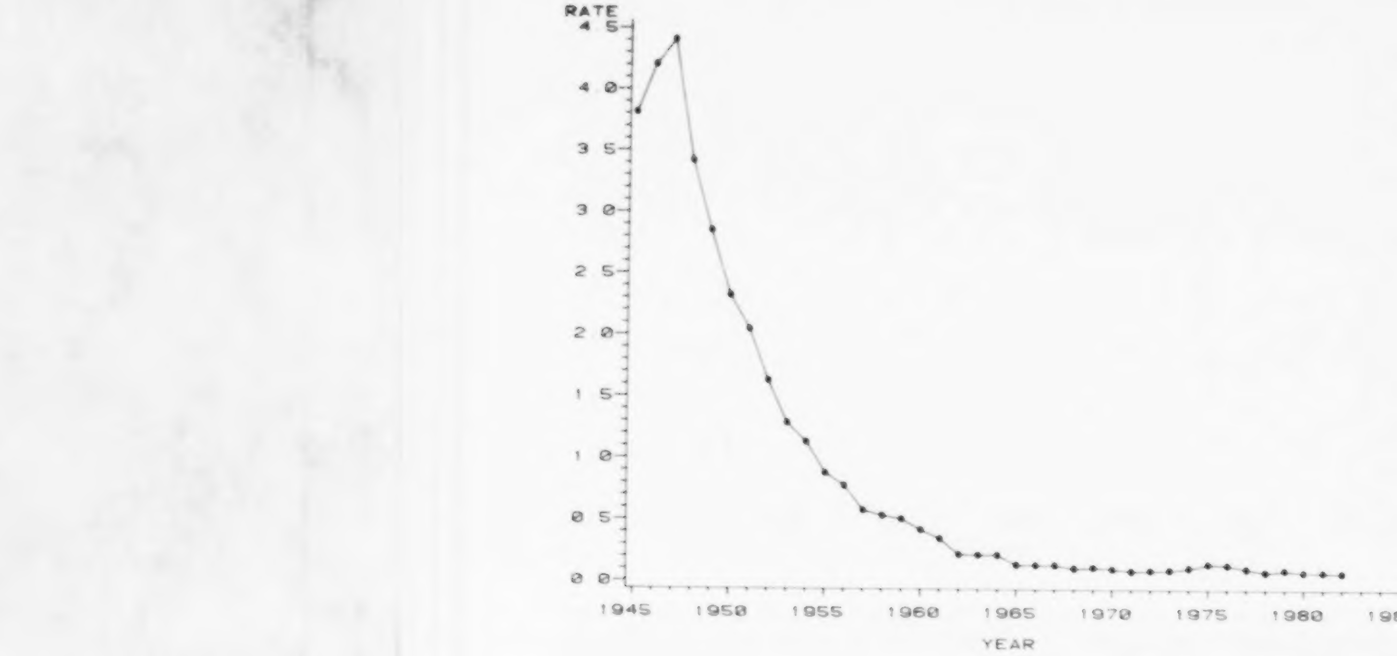
BOTULISM (infant) — Reported cases, by year, United States, 1975-1982



The 61 cases of infant botulism reported in 1982 represented about an equal number of males and females in the age range 2-48 weeks. Type A toxin and type B toxin were found in comparable numbers of specimens associated with the cases.

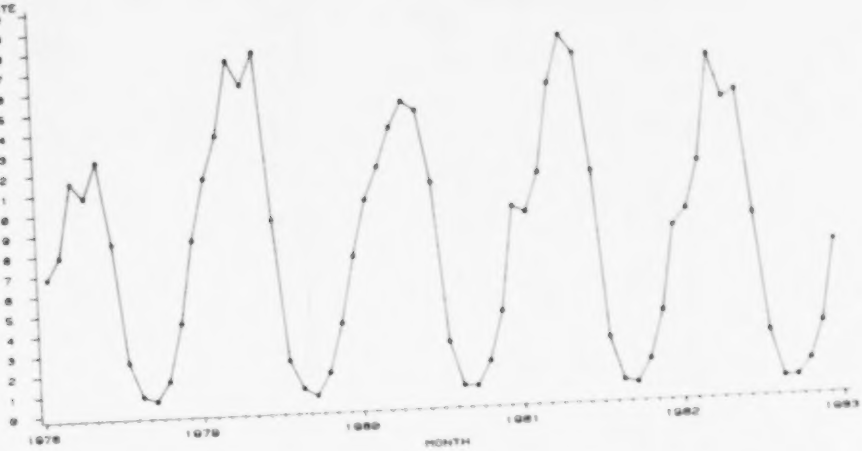
BRUCELLOSIS

BRUCELLOSIS — Reported cases per 100,000 population, by year, United States, 1945-1982



For 1982, 173 cases of brucellosis were reported to CDC. The reported occurrence of bruce losis in the United States sharply decreased from 1947 until 1965 because of widesprea adoption of dairy product pasteurization and the bovine-brucellosis eradication program. Th downward trend has subsequently continued, but at a slower rate.

CHICKENPOX — Reported cases per 100,000 population, by month, United States, 1978-1982



In 1982, 167,423 cases of chickenpox (varicella) were reported in the United States. Although reporting was required by fewer states than in 1981, chickenpox continues to be second only to gonorrhea as the most frequently reported infectious disease in the United States. As in prior years, the incidence in 1982 peaked between March and May.

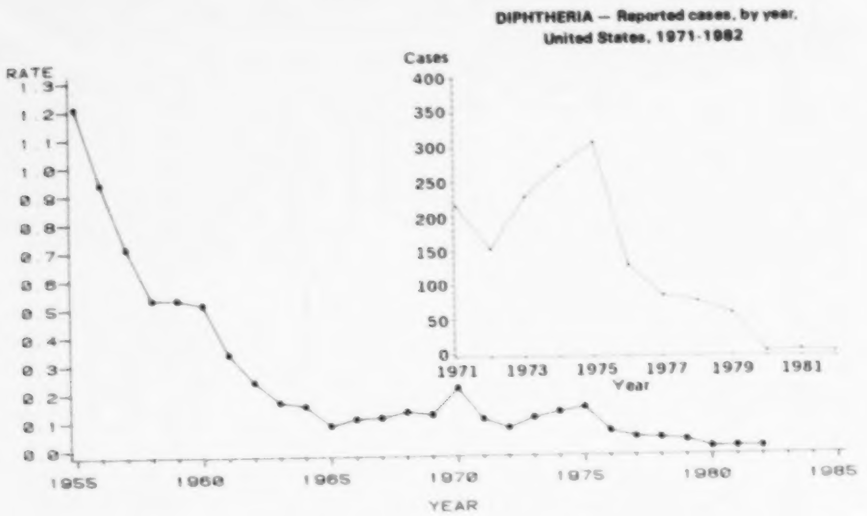
CHICKENPOX — Reported cases, by area and age group, selected areas, 1982

Area	Total	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
No. cases reported	**57,649**	**529**[1]	**5,242**[1]	**26,189**[2]	**8,155**[2]	**1,914**[2]	**268**[3]	**152**[3]	**143**[3]	**27**[4]	**29**[4]	**66**[5]	**6,534**
Ark	54	1	4	6	1	2	1	–	1	–	–	1	37
Conn	7,382	(		7,310		)	30	13	11	5	7	4	2
Del	302	5	69	108	40	9	11	7	3	–	–	–	50
Ill	19,159	143	1,057	12,967	3,690	653	64	24	20	(	27	)	524
Ky	2,660	2	14	16	7	3	2	–	–	–	1	–	2,615
Mass	8,238	(	906)	4,418	2,274	451	(	152	)	(6	)	5	28
N.Y. (excl. N.Y.C.)	5,049	41	398	2,701	898	222	77	32	31	3	12	44	590
N.Y.C.	3,382	98	890	1,337	493	159	92	74	77	19	9	12	122
S. Dak	271	3	26	56	14	7	1	2	–	–	–	–	163
Tex	11,060	236	2,784	4,540	720	406	–	–	–	–	–	–	2,364
Wyo	102	–	–	41	18	2	–	–	–	–	–	–	41
Guam	144	4	6	9	6	2	–	2	2	1	–	–	112

[1] Does not include cases reported by states of Connecticut and Massachusetts
[2] Does not include cases reported by state of Connecticut
[3] Does not include cases reported by state of Massachusetts
[4] Does not include cases reported by states of Illinois and Massachusetts
[5] Does not include cases reported by state of Illinois

Of the states reporting chickenpox by age for 1982, the 5-9 year age group had the highest incidence and accounted for 60% (26,189/43,737) of reported cases with age also reported (does not include data for Connecticut). Less than 10% of the cases affected persons ≥ 15 years of age.

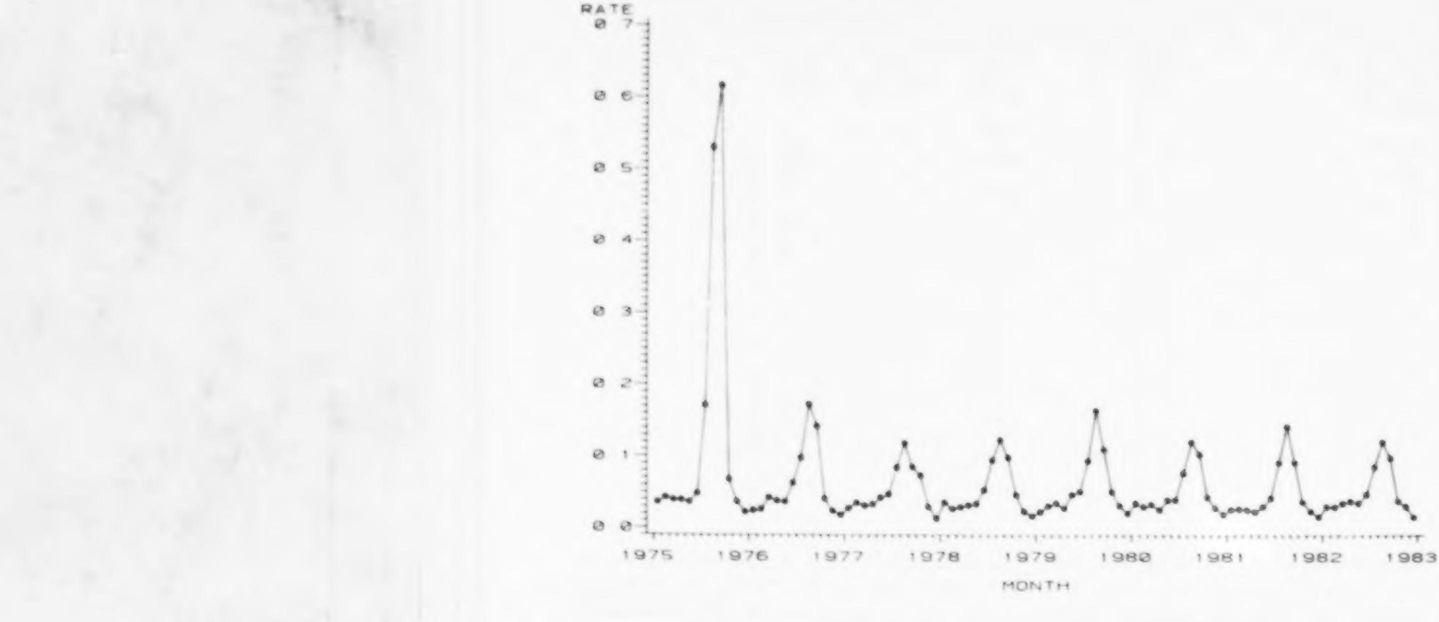
DIPHTHERIA — Reported cases per 100,000 population, by year, United States, 1955-1982



The incidence of diphtheria consists both of reported cutaneous and noncutaneous cases. The increase in the case rate beginning in 1973 and peaking in 1975 represents cutaneous cases in Washington State. Since 1976, reports of both cutaneous and noncutaneous cases have decreased markedly. For the past 3 years, ≤ 5 cases of noncutaneous diphtheria have been reported each year. When national reporting began, most cases of clinical diphtheria were among children. Over time, progressively larger proportions of cases have occurred in older individuals. For the last 3 years, seven of the 10 reported cases affected persons ≥ 20 years of age. Limited serosurveys done since 1977 indicated that 62% of adults 18-39 years of age and 41%-84% of those ≥ 60 years of age lacked protection against diphtheria. Health-care providers who treat adults should take every opportunity to ensure that they are protected against diphtheria in accordance with Immunization Practices Advisory Committee (ACIP) recommendations.

ENCEPHALITIS

ENCEPHALITIS — Reported cases per 100,000 population, by month of onset, United States, 1975-1982



Encephalitis reporting for 1982 was typical of recent years without major arboviral outbreaks. Reporting for 1975 shows the dramatic increase due to the St. Louis encephalitis epidemic of that year. The seasonality associated with encephalitis cases reflects a composite of increased arboviral and enteroviral activity during warm weather months.

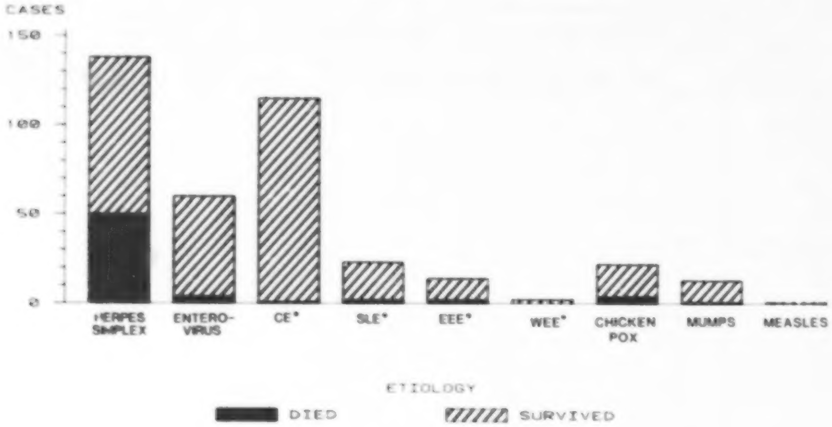
ENCEPHALITIS — Reported cases, by geographic division, area, and etiology, United States, 1982

Area	Total	Anthropod-borne[1]				Post childhood infections				Other known etiologies			Indeterminate etiology
		WEE	EEE	SLE	CE	Measles	Mumps	Chicken-pox	Rubella	Entero-virus	Herpes simplex	Other	
United States	**1,500**	**2**	**14**	**23**	**115**	**1**	**13**	**22**	—	**60**	**138**	**22**	**1,090**
New England	**65**	—	**2**	—	—	—	**3**	**3**	—	**4**	**2**	**3**	**48**
Maine	—	—	—	—	—	—	—	—	—	—	—	—	—
N.H.	8	—	—	—	—	—	—	—	—	—	—	—	8
Vt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mass.	26	—	2	—	—	—	—	—	—	—	2	1	21
R.I.	1	—	—	—	—	—	—	—	—	—	—	—	1
Conn.	30	—	—	—	—	—	3	3	—	4	—	2	18
Mid. Atlantic	**160**	—	—	—	**1**	—	—	**5**	—	**5**	**8**	**1**	**140**
N.Y. (excl. NYC)	76	—	—	—	1	—	—	—	—	3	7	1	64
N.Y.C.	—	—	—	—	—	—	—	—	—	—	—	—	—
N.J.	29	—	—	—	—	—	—	3	—	2	1	—	23
Pa.	55	—	—	—	—	—	—	2	—	—	—	—	53
E.N. Central	**478**	—	—	**2**	**85**	—	**7**	**2**	—	**26**	**20**	**4**	**332**
Ohio	151	—	—	—	37	—	3	—	—	3	2	1	105
Ind.	98	—	—	—	11	—	3	1	—	3	5	1	74
Ill.	71	—	—	2	7	—	—	—	—	—	8	2	52
Mich.	69	—	—	—	—	—	—	—	—	—	—	—	69
Wis.	89	—	—	—	30	—	1	1	—	20	5	—	32
W.N. Central	**136**	—	—	—	**11**	—	**1**	**1**	—	**3**	**4**	—	**116**
Minn.	61	—	—	—	4	—	1	—	—	1	1	—	54
Iowa	48	—	—	—	6	—	—	1	—	2	2	—	37
Mo.	19	—	—	—	—	—	—	—	—	—	—	—	19
N. Dak.	—	—	—	—	—	—	—	—	—	—	—	—	—
S. Dak.	1	—	—	—	—	—	—	—	—	—	—	—	1
Nebr.	5	—	—	—	1	—	—	—	—	—	—	—	4
Kans.	2	—	—	—	—	—	—	—	—	—	1	—	1
S. Atlantic	**197**	—	**12**	**4**	**14**	—	**1**	**2**	—	**6**	**32**	**4**	**122**
Del.	1	—	—	—	—	—	—	—	—	—	—	—	1
Md.	22	—	1	—	—	—	1	1	—	—	4	1	14
D.C.	—	—	—	—	—	—	—	—	—	—	—	—	—
Va.	43	—	—	—	—	—	—	—	—	—	—	—	43
W. Va.	16	—	—	—	—	—	—	—	—	—	—	—	16
N.C.	38	—	4	1	4	—	—	1	—	2	—	—	26
S.C.	5	—	—	—	2	—	—	—	—	—	1	—	2
Ga.	17	—	5	2	7	—	—	—	—	3	—	—	—
Fla.	55	—	2	1	1	—	—	—	—	1	27	3	20
E.S. Central	**49**	—	—	**10**	**3**	—	**1**	**1**	—	—	**5**	**3**	**26**
Ky.	3	—	—	—	1	—	—	—	—	—	—	—	2
Tenn.	3	—	—	1	2	—	—	—	—	—	—	—	—
Ala.	22	—	—	—	—	—	—	1	—	—	5	3	13
Miss.	21	—	—	9	—	—	1	—	—	—	—	—	11
W.S. Central	**197**	—	—	**7**	**1**	—	—	**3**	—	**10**	**29**	**2**	**145**
Ark.	4	—	—	2	—	—	—	—	—	—	2	—	—
La.	35	—	—	5	1	—	—	—	—	3	2	—	24
Okla.	44	—	—	—	—	—	—	2	—	—	7	1	34
Tex.	114	—	—	—	—	—	—	1	—	7	18	1	87
Mountain	**48**	**1**	—	—	—	—	—	—	—	**5**	**13**	**2**	**27**
Mont.	3	—	—	—	—	—	—	—	—	3	—	—	—
Idaho	1	—	—	—	—	—	—	—	—	—	—	—	1
Wyo.	—	—	—	—	—	—	—	—	—	—	—	—	—
Colo.	20	1	—	—	—	—	—	—	—	—	8	1	10
N. Mex.	1	—	—	—	—	—	—	—	—	—	—	—	1
Ariz.	16	—	—	—	—	—	—	—	—	—	5	1	10
Utah	2	—	—	—	—	—	—	—	—	2	—	—	—
Nev.	5	—	—	—	—	—	—	—	—	—	—	—	5
Pacific	**170**	**1**	—	—	—	**1**	—	**5**	—	**1**	**25**	**3**	**134**
Wash.	15	—	—	—	—	—	—	—	—	—	3	1	11
Oreg.	4	—	—	—	—	—	—	—	—	—	—	—	4
Calif.	120	1	—	—	—	1	—	5	—	1	21	1	90
Alaska	11	—	—	—	—	—	—	—	—	—	—	—	11
Hawaii	20	—	—	—	—	—	—	—	—	—	1	1	18
Guam	1	—	—	—	—	—	—	—	—	—	—	—	1
P.R.	—	—	—	—	—	—	—	—	—	—	—	—	—
V.I.	—	—	—	—	—	—	—	—	—	—	—	—	—

[1] Cases of arthropod-borne encephalitis include Western equine encephalitis (WEE), Eastern equine encephalitis (EEE), St. Louis encephalitis (SLE), and California encephalitis (CE).

ENCEPHALITIS

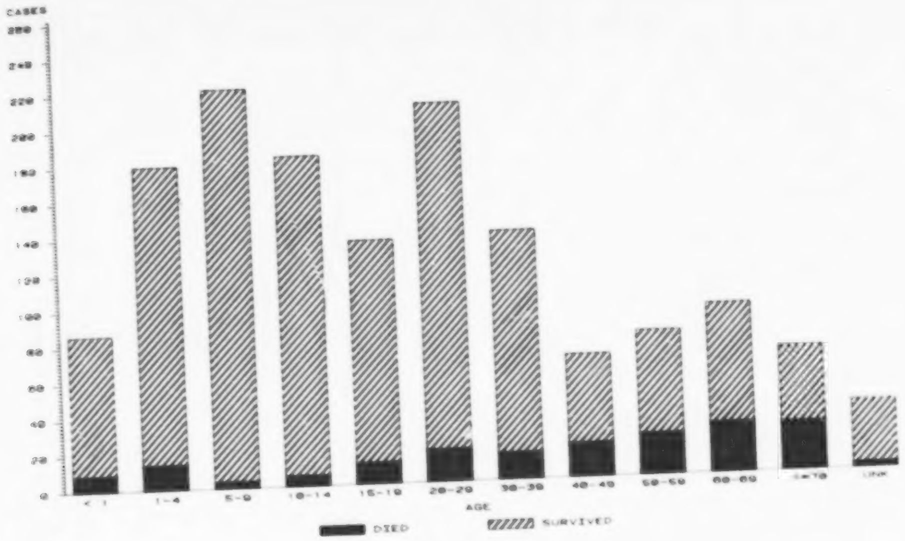
ENCEPHALITIS — Reported cases, by etiology and fatality, United States, 1982



*CE (California encephalitis), SLE (St. Louis encephalitis), EEE (Eastern equine encephalitis), WEE (Western equine encephalitis)

In 1982, the highest case-fatality ratio for encephalitis with known etiology was for persons with diagnosed herpes simplex infection (36%). In 1981, the case-fatality ratio for herpes simplex encephalitis was 42%, similar to case-fatality ratios reported for this entity during the last several years.

ENCEPHALITIS — Reported cases, by age group and fatality, United States, 1982



When the 1982 data for encephalitis-related fatality are examined by age, the highest case-fatality ratios are for persons ≥ 40 years of age, where the composite ratio is 32%. The lowest case-fatality ratio is for the 5- to 9-year age group (2%).

ENCEPHALITIS

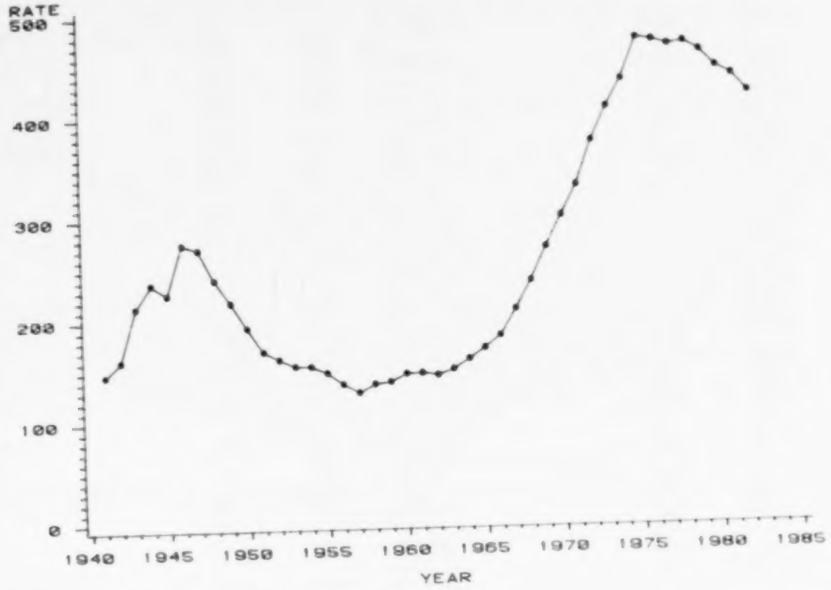
ENCEPHALITIS — Reported cases, by geographic division, area, and etiology, United States, 1981[1]

Area	Total	Anthropod-borne[2]				Post childhood infections				Other known etiologies			Indeterminate etiology
		WEE	EEE	SLE	CE	Measles	Mumps	Chicken-pox	Rubella	Entero-virus	Herpes simplex	Other	
United States	**1,535**	**18**	—	**13**	**76**	**1**	**7**	**35**	—	**77**	**107**	**26**	**1,175**
New England	**59**	—	—	—	—	—	**1**	**3**	—	**4**	**12**	—	**39**
Maine	1	—	—	—	—	—	—	—	—	—	—	—	1
N.H.	1	—	—	—	—	—	—	—	—	—	1	—	—
Vt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mass.	20	—	—	—	—	—	—	1	—	—	5	—	14
R.I.	1	—	—	—	—	—	—	—	—	—	1	—	—
Conn.	36	—	—	—	—	—	1	2	—	4	5	—	24
Mid. Atlantic	**111**	—	—	—	**5**	—	**1**	**11**	—	**3**	**13**	**4**	**74**
N.Y. (excl. NYC)	42	—	—	—	5	—	—	4	—	3	4	3	23
N.Y.C.	—	—	—	—	—	—	—	—	—	—	—	—	—
N.J.	16	—	—	—	—	—	—	5	—	—	6	—	5
Pa.	53	—	—	—	—	—	1	2	—	—	3	1	46
E.N. Central	**556**	—	—	—	**62**	—	**1**	**5**	—	**24**	**5**	**12**	**447**
Ohio	270	—	—	—	34	—	—	—	—	22	—	2	212
Ind.	94	—	—	—	1	—	1	3	—	—	—	6	83
Ill.	88	—	—	—	5	—	—	2	—	1	2	4	74
Mich.	64	—	—	—	1	—	—	—	—	—	—	—	63
Wis.	40	—	—	—	21	—	—	—	—	1	3	—	15
W.N. Central	**118**	**6**	—	**4**	**4**	—	—	**1**	—	**5**	**6**	**3**	**89**
Minn.	54	—	—	—	—	—	—	—	—	—	—	—	54
Iowa	32	—	—	—	4	—	—	1	—	5	—	1	21
Mo.	8	—	—	—	—	—	—	—	—	—	—	—	8
N. Dak.	1	1	—	—	—	—	—	—	—	—	—	—	—
S. Dak.	1	—	—	—	—	—	—	—	—	—	—	—	1
Nebr.	7	1	—	—	—	—	—	—	—	—	2	2	2
Kans.	15	4	—	4	—	—	—	—	—	—	4	—	3
S. Atlantic	**169**	—	—	**1**	**5**	**1**	**3**	**3**	—	**19**	**31**	**3**	**103**
Del.	—	—	—	—	—	—	—	—	—	—	—	—	—
Md.	28	—	—	—	—	—	1	1	—	1	7	—	18
D.C.	1	—	—	—	—	—	—	—	—	—	—	—	1
Va.	35	—	—	—	—	—	1	2	—	—	3	1	28
W. Va.	23	—	—	—	—	—	—	—	—	—	—	—	23
N.C.	35	—	—	—	5	—	1	—	—	—	6	—	23
S.C.	4	—	—	—	—	—	—	—	—	—	—	—	4
Ga.	—	—	—	—	—	—	—	—	—	—	—	—	—
Fla.	43	—	—	1	—	1	—	—	—	18	15	2	6
E.S. Central	**168**	—	—	—	—	—	**1**	**2**	—	—	**4**	—	**161**
Ky.	46	—	—	—	—	—	—	2	—	—	—	—	44
Tenn.	88	—	—	—	—	—	—	—	—	—	—	—	88
Ala.	19	—	—	—	—	—	—	—	—	—	1	—	18
Miss.	15	—	—	—	—	—	1	—	—	—	3	—	11
W.S. Central	**142**	**4**	—	**5**	—	—	—	**4**	—	**8**	**19**	**3**	**99**
Ark.	7	—	—	—	—	—	—	—	—	—	3	—	4
La.	11	—	—	—	—	—	—	1	—	—	3	—	7
Okla.	28	—	—	1	—	—	—	1	—	—	1	—	25
Tex.	96	4	—	4	—	—	—	2	—	8	12	3	63
Mountain	**61**	**8**	—	**3**	—	—	—	**1**	—	**7**	**3**	—	**39**
Mont.	3	3	—	—	—	—	—	—	—	—	—	—	—
Idaho	—	—	—	—	—	—	—	—	—	—	—	—	—
Wyo.	1	—	—	—	—	—	—	—	—	—	—	—	1
Colo.	19	4	—	2	—	—	—	—	—	—	—	—	13
N. Mex.	—	—	—	—	—	—	—	—	—	—	—	—	—
Ariz.	25	1	—	1	—	—	—	—	—	7	2	—	14
Utah	12	—	—	—	—	—	—	1	—	—	1	—	10
Nev.	1	—	—	—	—	—	—	—	—	—	—	—	1
Pacific	**151**	—	—	—	—	—	—	**5**	—	**7**	**14**	**1**	**124**
Wash.	8	—	—	—	—	—	—	—	—	—	3	—	5
Oreg.	6	—	—	—	—	—	—	—	—	—	—	—	6
Calif.	125	—	—	—	—	—	—	5	—	7	10	1	102
Alaska	5	—	—	—	—	—	—	—	—	—	—	—	5
Hawaii	7	—	—	—	—	—	—	—	—	—	1	—	6
Guam	—	—	—	—	—	—	—	—	—	—	—	—	—
P.R.	2	—	—	—	—	—	—	—	—	—	—	—	2
V.I.	—	—	—	—	—	—	—	—	—	—	—	—	—

[1] This table has been included to update the provisional data published in the 1981 Annual Summary.

[2] Cases of arthropod-borne encephalitis include Western equine encephalitis (WEE), Eastern equine encephalitis (EEE), St. Louis encephalitis (SLE), and California encephalitis (CE).

GONORRHEA — Reported civilian cases per 100,000 population, by year, United States, 1941-1982*



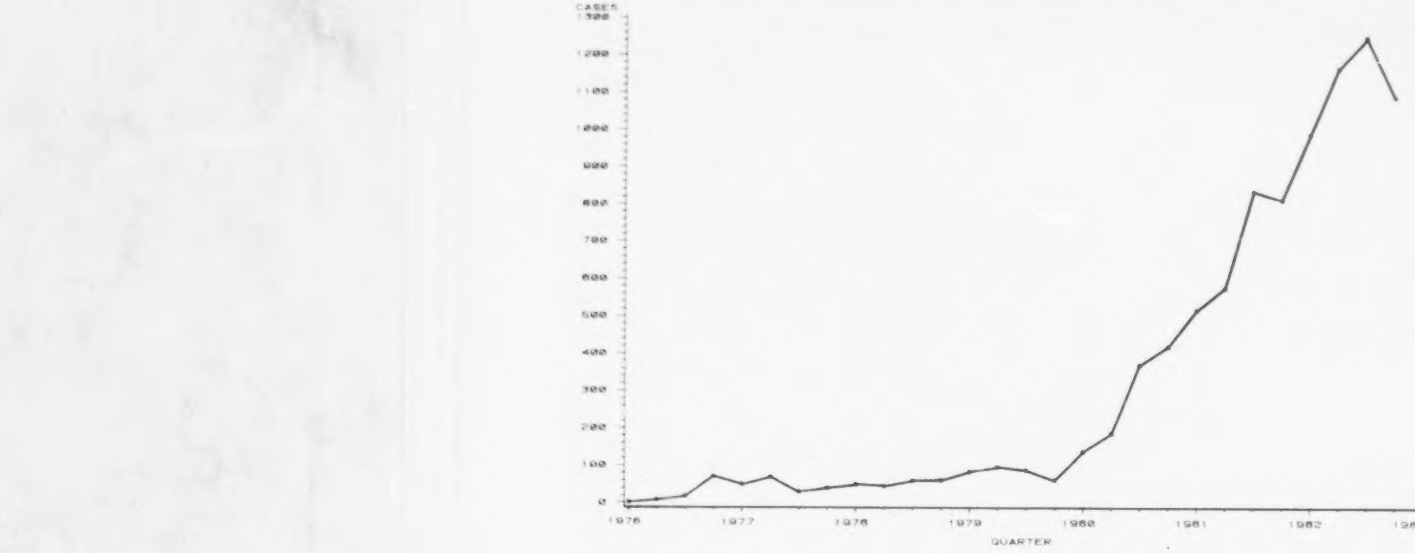
*1941-1946 fiscal years (twelve-month period ending June 30 of the years specified)
1947-1982 calendar years.

The number of reported cases of gonorrhea has continued to decrease each year since 1975, with 960,633 cases reported in 1982, down slightly (-3.1%) from the 990,864 cases reported in 1981. Gonorrhea rates per 100,000 population declined 11.6%, from 472.9 in 1975 to 417.9 in 1982. Age-adjusted gonorrhea rates per 100,000 population between 1975 and 1981 showed an even greater decline (450.6 in 1975 to 395.8 in 1981, a decrease of 12.2%).

The pattern of decline is believed to be due to increased program control efforts. The general decrease took place approximately 3 years after the gonorrhea control program began in 1972 and has occurred despite social changes in the 1970s that placed increasing numbers of people at risk for sexually transmitted disease (STD). For example: 1) the proportion of population at highest risk for STD, the 15- to 29-year group, increased 27.5% in the period 1970-1981, while the total population increased only 11.7% in this same period; 2) increasing and less discriminating sexual activity occurred among teenagers and unmarried young adults; 3) the percentage of women 15 to 19 years of age who had ever had intercourse before marriage increased from 30% in 1971 to 50% in 1979; and 4) although more teenagers used contraceptives, the level of premarital pregnancy among teenagers increased from 9% in 1971 to 16% in 1979.

GONORRHEA

GONORRHEA — Reported penicillinase-producing *Neisseria gonorrhoeae* (PPNG) cases, by quarter, United States (including Guam, Puerto Rico, Virgin Islands, and the Pacific Trust Territories), January 1976-December 1982



The prevalence of infections caused by penicillinase-producing *Neisseria gonorrhoeae* (PPNG), a strain resistant to all forms of penicillin, has increased in the United States, and the organism has been identified in many other countries. In 1982, 4,457 cases of PPNG were reported, comprising approximately 0.5% of all gonorrhea cases reported for the year. In the period March 1976-December 1982, some 9,100 cases were reported in the United States.

Current control problems include a combination of continuing domestic transmission and importation of PPNG; e.g., in one study, 14% of patients had traveled to other states, and almost 15% of patients had recently returned from overseas areas of high PPNG prevalence.

Intensified control measures have been successful in controlling outbreaks. For example, in Los Angeles, between January and July 1981, reports of an average of 49 cases of PPNG were received each month; for the same period in 1982, the monthly average was 10. Hawaii reported 109 cases of PPNG between January and July 1981, while a total of 61 cases was reported for the same period in 1982.

PPNG control efforts include: 1) surveillance for PPNG by testing all gonococcal isolates for penicillinase production; 2) timely identification and treatment of the sexual partner(s) of all PPNG patients; 3) screening groups at high risk for PPNG infection; and 4) use of spectinomycin as the initial treatment for persons at high risk for PPNG infection.

GONORRHEA — Reported cases in civilians per 100,000 population, by geographic division, area, and city[1], United States, 1982 and 1981

Area	Rate	
	1982	1981
United States	**417.9**	**436.2**
New England	**185.4**	**194.2**
Maine	103.7	116.5
N.H.	78.9	95.2
Vt.	80.8	83.7
Mass.	180.1	179.3
R.I.	165.8	163.5
Conn.	279.8	306.6
Mid. Atlantic	**327.2**	**328.3**
N.Y.	390.2	401.4
N.J.	300.8	306.1
Pa.	249.9	233.9
E.N. Central	**331.0**	**357.7**
Ohio	333.7	396.0
Ind.	293.9	286.2
Ill.	355.9	390.6
Mich.	381.1	353.8
Wis.	250.7	281.6
W.N. Central	**264.3**	**274.4**
Minn.	155.3	166.2
Iowa	167.0	177.9
Mo.	418.6	452.6
N. Dak.	84.7	89.4
S. Dak.	164.0	188.7
Nebr.	168.7	224.9
Kans.	321.8	317.2
S. Atlantic	**672.2**	**669.0**
Del.	698.2	662.9
Md.	764.3	689.3
Va.	395.7	419.6
W. Va.	134.1	169.5
N.C.	670.4	637.1
S.C.	766.1	771.9
Ga.	927.5	927.7
Fla.	607.2	598.1
E.S. Central	**560.2**	**563.8**
Ky.	303.5	284.7
Tenn.	701.0	688.6
Ala.	625.2	628.9
Miss.	570.6	638.4
W.S. Central	**527.8**	**533.4**
Ark.	452.3	429.5
La.	576.5	548.1
Okla.	462.1	465.6
Texas	538.9	559.5
Mountain	**284.2**	**340.8**
Mont.	166.0	183.1
Idaho	158.8	189.1
Wyo.	192.6	209.2
Colo.	317.4	358.9
N. Mex.	325.6	343.6
Ariz.	316.5	416.9
Utah	102.4	127.9
Nev.	622.8	805.6
Pacific	**413.3**	**479.5**
Wash.	271.6	317.2
Oreg.	294.4	346.9
Calif.	448.0	518.9
Alaska	831.1	1040.1
Hawaii	293.8	332.8
Guam	0.0	58.9
P.R.	82.9	107.4
V.I.	0.0	136.0

Area	Rate	
	1982	1981
United States Cities	**853.0**	**893.3**
New England	**993.3**	**982.4**
Boston, Mass.	993.3	982.4
Mid. Atlantic	**762.0**	**733.9**
Buffalo, N.Y.	1008.5	1064.0
Jersey City, N.J.	681.7	702.3
Newark, N.J.	1984.4	1937.7
New York City, N.Y.	694.2	695.5
Philadelphia, Pa.	1035.8	933.8
Pittsburgh, Pa.[2]	321.4	286.6
Rochester, N.Y.	1589.3	1519.3
Yonkers, N.Y.	173.7	182.1
E.N. Central	**1056.1**	**1141.2**
Akron, Ohio	807.0	687.1
Chicago, Ill.	846.7	916.5
Cincinnati, Ohio	1367.9	1880.8
Cleveland, Ohio	1510.4	1744.5
Columbus, Ohio	971.7	1046.0
Dayton, Ohio	1410.7	2069.7
Detroit, Mich.	1348.8	1232.0
Indianapolis, Ind.[2]	961.1	943.8
Milwaukee, Wis.	1284.3	1398.4
Toledo, Ohio	696.9	879.3
W.N. Central	**767.9**	**839.5**
Des Moines, Iowa	414.3	480.7
Kansas City, Mo.	1354.0	1491.0
Minneapolis, Minn.[2]	346.5	401.3
Omaha, Nebr.[2]	471.4	600.8
St. Louis, Mo.	1970.0	1985.0
St. Paul, Minn.	473.9	401.9
Wichita, Kans.[2]	582.5	662.0
S. Atlantic	**1480.4**	**1397.1**
Atlanta, Ga.[2]	3022.3	3073.5
Baltimore, Md.	2884.2	2393.3
Charlotte, N.C.	1728.7	1712.3
Jacksonville, Fla.	1361.7	1117.1
Miami, Fla.[2]	554.1	643.9
Norfolk, Va.	1273.0	1329.4
Richmond, Va.	1626.3	1612.9
St. Petersburg, Fla.[2]	523.4	573.6
Tampa, Fla.[2]	897.6	848.3
Washington, D.C.	2406.7	2241.0
E.S. Central	**1220.3**	**1196.6**
Birmingham, Ala.[2]	983.6	1066.9
Louisville, Ky.[2]	820.7	770.2
Memphis, Tenn.[2]	1829.5	1637.0
Nashville, Tenn.[2]	1124.6	1268.5
W.S. Central	**928.8**	**930.4**
Austin, Tex.[2]	888.9	822.6
Corpus Christi, Tex.[2]	477.3	453.9
Dallas, Tex.[2]	1036.1	1034.4
El Paso, Tex.[2]	537.9	469.1
Fort Worth, Tex.[2]	631.2	626.1
Houston, Tex.[2]	1123.8	1135.8
New Orleans, La.	1669.1	1707.6
Oklahoma City, Okla.	1249.3	1267.5
San Antonio, Tex.[2]	423.8	447.1
Tulsa, Okla.	738.3	746.3
Mountain	**451.3**	**536.6**
Albuquerque, N.M.[2]	358.9	454.4
Denver, Colo.	1063.7	1151.6
Phoenix, Ariz.[2]	343.7	437.1
Tucson, Ariz.[2]	304.2	336.9
Pacific	**564.3**	**681.1**
Honolulu, Hawaii	507.8	572.8
Los Angeles, Calif.[2]	566.8	704.2
Oakland, Calif.[3]	564.6	673.8
Portland, Oreg.[2]	624.4	731.4
Sacramento, Calif.[2]	386.5	455.5
San Diego, Calif.[2]	379.2	380.9
San Francisco, Calif.	2132.0	2561.8
San Jose, Calif.[2]	325.3	403.5
Seattle, Wash.[2]	364.5	437.8
San Juan, P.R.[2]	312.9	405.7

Note: Rate for United States includes Washington, D.C.

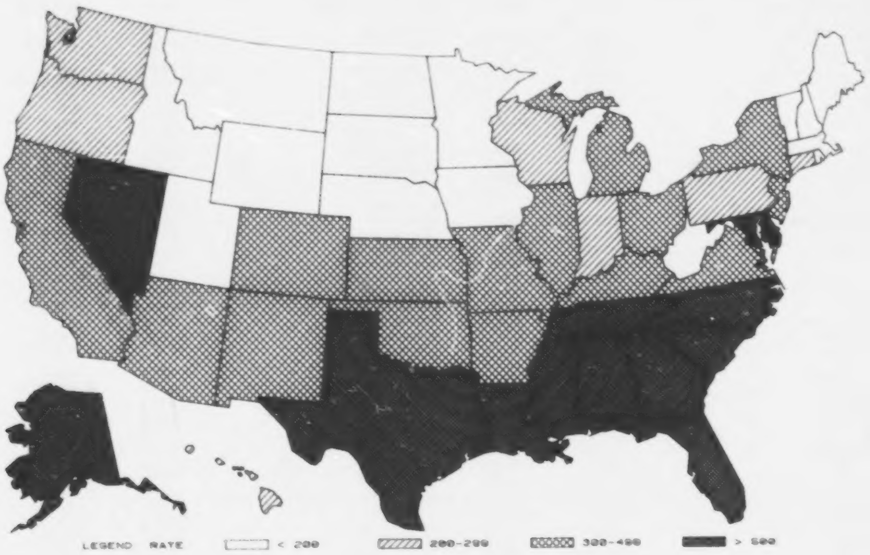
[1] Restricted to cities with population of 200,000 or more in 1970.

[2] County data or equivalent.

[3] Oakland is Alameda County less Berkeley.

GONORRHEA

GONORRHEA — Reported cases in civilians per 100,000 population, by state, United States, 1982



The national rate of reported gonorrhea cases per 100,000 population was 417.9 in 1982. Gonorrhea rates were higher in large urban areas than in less populated areas. In 1982, 63 cities with populations of 200,000 or more, and comprising only 25.8% of the nation's population, accounted for 52.6% of reported cases. Rates per 100,000 population ranged geographically from 78.9 in New Hampshire to 927.5 in Georgia.

GONORRHEA — Reported cases in civilians and cases per 100,000 population, by age and sex, United States, 1982 and 1981

	Male			
	1982*		1981	
Age Group	Cases	Rate	Cases	Rate
0-14	2,783	10.6	2,846	10.9
15-19	97,015	980.1	99,224	978.2
20-24	217,448	2107.3	222,399	2150.7
25-29	136,495	1364.7	139,603	1436.4
30-39	92,507	557.8	94,613	590.7
40-49	21,053	185.2	21,532	193.2
50+	7,851	29.6	8,031	30.5
Total	**575,152**	**618.3**	**588,248**	**635.2**

	Female			
	1982*		1981	
Age Group	Cases	Rate	Cases	Rate
0-14	7,670	30.6	8,011	32.0
15-19	138,071	1424.9	144,208	1442.9
20-24	145,687	1356.2	152,163	1415.2
25-29	58,542	567.2	61,144	609.1
30-39	28,701	165.6	29,977	178.8
40-49	4,919	40.9	5,138	43.6
50+	1,891	5.6	1,975	5.9
Total	**385,481**	**324.2**	**402,616**	**341.9**

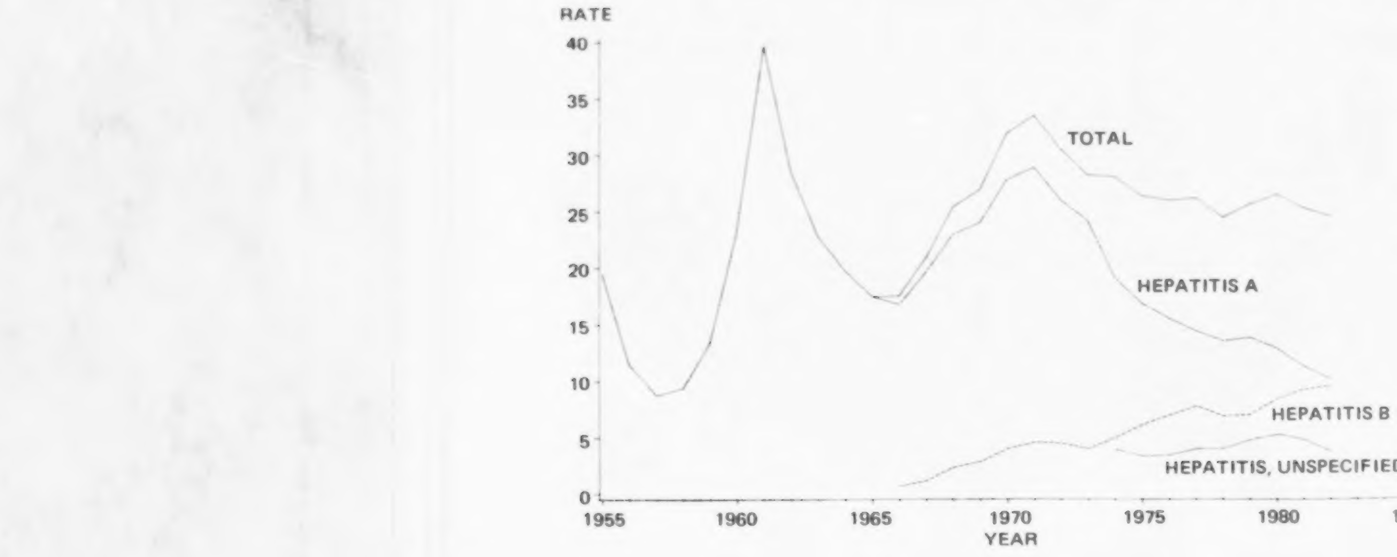
	Total			
	1982*		1981	
Age Group	Cases	Rate	Cases	Rate
0-14	10,453	20.4	10,857	21.1
15-19	235,086	1200.2	243,432	1208.8
20-24	363,135	1724.2	374,562	1775.8
25-29	195,037	959.6	200,747	1016.0
30-39	121,208	357.4	124,590	380.0
40-49	25,972	111.0	26,670	116.3
50+	9,742	16.2	10,006	16.8
Total	**960,633**	**417.9**	**990,864**	**436.2**

*Age distributions are provisional

Age-specific rates per 100,000 population for gonorrhea show that young adults (20-24 years of age) are at greatest risk of acquiring the disease, with the second highest risk group being teenagers (15-19 years of age). Teenagers accounted for 25% and young adults for 38% of all gonorrhea cases reported. The overall rate was higher for males than for females. The highest-age risk group for males was 20-29 years of age and for females was 15-24 years of age.

HEPATITIS

HEPATITIS — Reported cases per 100,000 population, by year, United States, 1955-1982



Viral hepatitis is the fourth most frequently reported infectious disease in the United State For 1982, 56,773 cases of viral hepatitis were reported, representing a negligible decrease 2% from 1981. Of the total cases, 23,403 (41%) were reported as hepatitis A, 22,177 (39 were reported as hepatitis B, 2,629 (5%) were reported as non-A, non-B (a separate reportab disease category to the *MMWR* for the first time in 1982), and 8,564 (15%) were report as unspecified. The trends observed since 1975 continue; i.e., reported cases of hepatitis are decreasing while reported cases of hepatitis B are increasing. The accuracy with whi non-A, non-B hepatitis was reported is unknown, but other studies in the United States in cate that these numbers represent a significant underestimate.

HEPATITIS — Distribution of viral hepatitis types A, B, and non-A, non-B, by sex, United States, 1982

Sex	Percentage of Cases Hepatitis A N=21,707*	Hepatitis B N=20,667*	Hepatitis non-A, non-B N=2,214*
Male	56.8	64.9	52.2
Female	43.2	35.1	47.8

*Excludes unknown sex

Over half of the cases of all types of hepatitis are reported among persons 20-39 years of age. For both hepatitis A and non-A, non-B, the male-to-female ratio is approximately 1:1, but for hepatitis B, this ratio is almost 2:1.

HEPATITIS — Distribution of viral hepatitis types A and B, by sex and age, United States, 1978-1982

	Hepatitis A					Hepatitis B				
		Percentage					Percentage			
		Male		Female			Male		Female	
Year	Cases*	Ages 20-39	Other ages	Ages 20-39	Other ages	Cases*	Ages 20-39	Other ages	Ages 20-39	Other ages
1978	25,055	30.6	25.0	19.9	24.4	12,914	41.5	20.3	21.7	16.5
1979	26,936	29.3	24.5	20.7	25.4	13,643	44.5	19.8	21.1	14.6
1980	26,969	32.9	24.2	19.8	23.1	17,091	44.8	20.1	20.7	14.3
1981	23,453	33.5	24.0	19.9	22.6	18,913	44.7	19.7	21.3	14.3
1982	21,054	30.6	26.1	19.5	23.7	19,913	45.1	19.7	21.5	13.7

*Excludes unknown age and sex

Males 20-39 years of age are twice as likely to be reported to have hepatitis B as persons in any other category. For hepatitis A, there is a much smaller difference between males and females regardless of age.

HEPATITIS

HEPATITIS A — Reported cases, by area and month, United States, 1982

Area	Total	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov.	Dec.
United States	23,403	1,685	2,053	2,111	1,715	1,985	1,679	1,748	1,847	2,080	2,187	1,880	2,336
New England	**538**	**43**	**41**	**58**	**38**	**32**	**55**	**42**	**33**	**25**	**64**	**40**	**65**
Maine	41	1	2	8	3	6	3	7	4	-	3	2	2
N.H.	28	4	2	4	1	6	1	1	-	1	2	2	4
Vt.	53	3	1	4	4	3	4	6	4	5	6	8	5
Mass.	211	22	13	32	17	12	28	18	16	13	15	17	10
R.I.	87	6	12	5	10	5	13	3	3	1	10	6	13
Conn.	118	7	11	6	4	-	8	7	6	5	28	5	31
Mid. Atlantic	**3,259**	**288**	**274**	**312**	**253**	**254**	**246**	**272**	**277**	**297**	**274**	**234**	**228**
N.Y. (excl. NYC)	564	41	58	58	28	48	44	54	68	45	44	44	32
N.Y.C.	689[1]	36	48	98	81	47	48	51	43	62	66	52	57
N.J.	718	110	79	67	54	60	46	50	47	82	53	46	44
Pa.	1,288	81	89	89	90	99	108	117	119	128	111	92	95
E.N. Central	**3,080**	**234**	**261**	**305**	**237**	**211**	**246**	**190**	**289**	**350**	**283**	**248**	**236**
Ohio	774	20	42	93	56	54	59	48	84	90	80	59	89
Ind.	656	65	71	39	43	41	80	23	71	88	72	35	30
Ill.	601	67	51	64	52	35	30	50	37	55	53	56	51
Mich.	727	54	59	86	48	50	60	49	67	81	60	63	50
Wis.	322	28	28	23	38	31	17	20	30	38	18	35	16
W.N. Central	**829**	**81**	**68**	**83**	**51**	**133**	**61**	**55**	**64**	**61**	**65**	**46**	**61**
Minn.	235	24	37	30	9	20	34	20	6	15	21	6	13
Iowa	79	8	8	7	14	4	6	5	2	10	9	3	3
Mo.	204	28	10	29	14	20	11	14	30	23	15	7	3
N. Dak.	4	3				1	-	-	-	-	-	-	-
S. Dak.	14	3	1	1	1	1	-	-	3	-	3	-	1
Nebr.	34	4	-	5	2	1	-	3	5	2	3	3	6
Kans.	254	11	12	11	11	86	10	13	18	11	14	27	35
S. Atlantic	**2,495**	**161**	**183**	**194**	**157**	**217**	**183**	**215**	**229**	**221**	**307**	**208**	**193**
Del.	46	4	2	4	3	7	3	5	3	10	2	1	2
Md.	177	16	18	18	8	15	10	14	14	13	17	21	13
D.C.	17	2	2	-	3	2	1	-	2	1	2	1	1
Va.	189	14	16	19	12	25	11	14	14	12	31	8	13
W. Va.	91	10	6	8	-	16	7	6	5	13	10	5	5
N.C.	150	5	12	11	16	16	17	11	21	11	11	13	6
S.C.	316	12	5	24	12	25	15	24	21	27	60	52	39
Ga.	387	17	27	22	30	19	19	27	23	36	80	39	48
Fla.	1,122	81	95	88	73	92	100	114	126	98	94	68	66
E.S. Central	**947**	**74**	**83**	**78**	**76**	**75**	**69**	**54**	**70**	**78**	**93**	**52**	**124**
Ky.	336	24	38	35	29	18	30	14	28	43	31	17	29
Tenn.	346	39	34	22	28	34	41	24	24	24	73	21	32
Ala.	128	10	3	10	7	9	5	8	10	8	19	2	37
Miss.	137	1	8	11	12	14	13	8	8	4	20	12	26
W.S. Central	**4,900**	**243**	**518**	**390**	**386**	**512**	**269**	**381**	**318**	**400**	**477**	**379**	**617**
Ark.	81	6	13	8	8	7	5	4	10	5	5	5	5
La.	781	20	70	66	49	50	57	50	45	68	62	79	165
Okla.	812	17	53	60	75	95	33	87	55	67	87	49	134
Tex.	3,226	200	382	256	264	360	174	240	208	260	323	246	313
Mountain	**1,961**	**186**	**156**	**152**	**164**	**129**	**149**	**164**	**158**	**175**	**157**	**173**	**198**
Mont.	42	5	4	8	5	3	4	2	1	5	1	4	-
Idaho	63	9	7	7	3	4	4	8	2	8	3	2	6
Wyo.	68	4	28	3	6	8	3	3	1	3	3	3	3
Colo.	347	43	24	45	34	28	17	22	22	29	32	14	37
N. Mex.	445	31	41	32	27	25	43	52	59	37	29	38	31
Ariz.	627	65	33	32	50	40	30	50	40	67	71	75	74
Utah	187	16	9	9	17	5	19	15	15	11	9	26	36
Nev.	182	13	10	16	22	16	29	12	18	15	9	11	11
Pacific	**5,394**	**395**	**479**	**538**	**342**	**422**	**381**	**375**	**409**	**472**	**467**	**500**	**614**
Wash.	494	57	109	66	49	69	31	18	21	14	19	17	24
Oreg.	377	21	25	30	19	28	29	27	31	30	59	37	41
Calif.	4,422	300	331	432	262	317	314	326	352	419	385	440	544
Alaska	20	3	3	2	2	-	1	-	2	2	1	2	2
Hawaii	81	14	11	8	10	8	6	4	3	7	3	4	3
Guam	2	-	-	-	-	-	-	1	1	-	-	-	-
P.R.	279	20	10	27	21	18	28	17	32	19	52	27	8
V.I.	4	-	-	-	-	-	-	-	2	-	-	2	-
Pac. Trust Terr.	1	-	-	-	-	-	-	-	-	-	-	1	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

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[1] Cases represent patients tested for HBsAg and found to be negative

HEPATITIS A—Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk
United States	**23,403**	**63**	**1,017**	**2,447**	**1,912**	**2,390**	**3,964**	**3,755**	**3,433**	**1,319**[1]	**960**[1]	**1,114**	**934**
New England	**538**	**3**	**8**	**18**	**52**	**58**	**68**	**80**	**83**	**56**	**33**	**43**	**36**
Maine	41	—	—	—	5	4	1	3	4	2	1	3	18
N.H.	28	—	—	—	2	4	3	1	5	7	1	5	—
Vt.	53	2	4	1	3	5	7	13	8	2	2	6	—
Mass.	211	1	2	7	16	17	33	36	39	24	10	10	16
R.I.	87	—	1	4	11	9	11	14	16	5	6	10	—
Conn.	118	—	1	6	15	19	13	13	11	16	13	9	2
Mid. Atlantic	**3,259**	**5**	**44**	**157**	**181**	**377**	**659**	**601**	**505**	**217**	**219**	**254**	**40**
N.Y. (excl. N.Y.C.)	564	—	6	20	35	47	106	77	88	54	48	59	24
N.Y.C.	689[2]	3	12	39	36	55	92	128	148	48	56	65	7
N.J.	718	—	8	26	34	83	136	144	103	50	55	70	9
Pa.	1,288	2	18	72	76	192	325	252	166	65	60	60	—
E.N. Central	**3,080**	**14**	**135**	**380**	**301**	**321**	**432**	**413**	**436**	**168**[1]	**129**[1]	**149**	**87**
Ohio	774	1	36	109	86	91	111	97	93	43	33	32	42
Ind.	656	2	30	86	63	61	92	99	98	42	33	36	14
Ill.	601	2	29	85	52	66	78	79	87	(115)		1	7
Mich.	727	4	21	72	64	81	100	94	104	60	43	67	17
Wis.	322	5	19	28	36	22	51	44	54	23	20	13	7
W.N. Central	**829**	**2**	**23**	**53**	**63**	**80**	**118**	**159**	**126**	**48**	**46**	**49**	**62**
Minn.	235	—	12	16	20	19	28	30	55	20	19	13	3
Iowa	79	—	—	4	6	15	11	8	16	3	5	9	2
Mo.	204	1	7	15	20	20	33	30	28	16	7	11	16
N. Dak.	4	—	—	—	—	—	1	2	—	—	—	1	—
S. Dak.	14	—	1	1	—	1	2	3	4	—	1	1	—
Nebr.	34	—	—	8	—	2	2	3	3	3	5	6	2
Kans.	259	1	3	9	17	23	41	83	20	6	9	8	39
S. Atlantic	**2,495**	**6**	**93**	**184**	**144**	**242**	**467**	**429**	**402**	**170**	**132**	**170**	**56**
Del.	46	—	—	—	3	4	10	6	13	2	4	1	3
Md.	177	—	6	9	18	18	36	26	28	12	8	16	—
D.C.	17	—	—	—	1	3	4	5	2	2	—	—	—
Va.	189	1	6	9	1	19	39	29	29	13	21	19	3
W. Va.	91	—	1	7	6	8	10	11	14	9	8	10	7
N.C.	150	—	3	6	5	15	30	21	26	10	17	16	1
S.C.	316	2	16	36	20	23	58	63	44	13	10	12	19
Ga.	387	1	10	21	22	45	70	79	68	22	16	18	15
Fla.	1,122	2	51	96	68	107	210	189	178	87	48	78	8
E.S. Central	**947**	**5**	**33**	**111**	**82**	**117**	**174**	**140**	**120**	**61**	**36**	**59**	**9**
Ky.	336	—	14	62	42	36	53	50	34	11	16	11	7
Tenn.	346	3	8	27	28	43	70	57	52	26	12	20	—
Ala.	128	—	6	12	6	20	27	17	15	10	5	10	—
Miss.	137	2	5	10	6	18	24	16	19	14	3	18	2
W.S. Central	**4,900**	**13**	**275**	**696**	**504**	**544**	**816**	**777**	**583**	**180**	**106**	**113**	**293**
Ark.	81	—	—	7	8	9	16	18	9	4	4	6	—
La.	781	—	25	68	78	82	94	113	87	22	20	16	176
Okla.	812	4	70	115	71	96	114	135	86	31	15	15	60
Tex.	3,226	9	180	506	347	357	592	511	401	123	67	76	57
Mountain	**1,961**	**8**	**158**	**273**	**203**	**171**	**308**	**287**	**281**	**97**	**49**	**55**	**71**
Mont.	42	—	3	5	3	5	8	5	2	1	1	6	3
Idaho	63	1	4	8	7	8	7	7	7	3	2	3	6
Wyo.	68	—	8	3	1	10	13	12	10	3	1	—	7
Colo.	347	—	12	23	28	39	66	78	57	16	12	8	8
N. Mex.	445	—	38	101	71	37	64	44	56	12	6	6	10
Ariz.	627	5	76	100	61	46	102	80	84	35	12	20	6
Utah	187	1	14	22	24	11	22	29	30	16	9	5	4
Nev.	182	1	3	11	8	15	26	32	35	11	6	7	27
Pacific	**5,394**	**7**	**248**	**575**	**382**	**480**	**922**	**869**	**897**	**322**	**210**	**222**	**280**
Wash.	494	4	26	45	32	42	86	83	91	21	25	24	15
Oreg.	377	—	3	33	24	31	70	66	72	33	19	20	6
Calif.	4,422	3	216	493	325	382	736	699	713	262	160	175	258
Alaska	20	—	—	1	—	1	3	8	2	1	3	1	—
Hawaii	81	—	3	3	1	4	27	13	19	5	3	2	1
Guam	2	—	1	—	—	—	—	—	1	—	—	—	—
P.R.	279	1	6	21	34	52	73	35	21	11	5	6	14
V.I.	4	—	—	—	—	—	1	—	2	—	—	—	1
Pac. Trust Terr.	1						NA						1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—

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[1] Does not include cases reported by state of Illinois

[2] Cases represent patients tested for HBsAg and found to be negative

HEPATITIS B — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**22,177**	**1,588**	**1,568**	**1,987**	**1,730**	**1,823**	**1,827**	**1,688**	**1,830**	**1,909**	**1,903**	**1,921**	**2,098**	**305**
New England	**1,338**	**115**	**87**	**100**	**90**	**75**	**107**	**88**	**91**	**98**	**125**	**113**	**249**	-
Maine	57	3	5	6	3	7	12	3	4	1	7	4	2	-
N.H.	43	2	5	7	4	1	3	3	2	3	5	3	5	-
Vt.	20	1	2	4	-	-	-	1	-	2	3	4	3	-
Mass.	535	38	38	39	45	45	43	36	41	53	50	59	48	-
R.I.	114	10	5	11	4	14	10	10	5	11	10	9	15	-
Conn.	569	61	32	33	34	8	39	35	39	28	50	34	176	-
Mid. Atlantic	**4,022**	**277**	**279**	**377**	**322**	**342**	**334**	**281**	**321**	**330**	**309**	**364**	**296**	**190**
N.Y. (excl. NYC)	805	48	68	73	68	68	68	67	78	65	64	68	70	-
N.Y.C.	1,117[1]	32	52	109	114	100	87	56	92	116	89	144	126	-
N.J.	1,094	126	101	131	78	111	97	93	74	84	81	69	49	-
Pa.	1,006	71	58	64	62	63	82	65	77	65	75	83	51	190
E.N. Central	**2,868**	**182**	**162**	**261**	**238**	**217**	**257**	**226**	**277**	**255**	**259**	**286**	**248**	-
Ohio	777	15	35	82	71	58	96	63	92	59	74	70	62	-
Ind.	401	35	33	37	55	24	25	16	32	44	33	29	38	-
Ill.	690	47	45	52	51	56	49	61	66	53	61	64	85	-
Mich.	851	75	40	79	49	65	77	72	70	84	80	105	55	-
Wis.	149	10	9	11	12	14	10	14	17	15	11	18	8	-
W.N. Central	**735**	**86**	**64**	**52**	**59**	**72**	**73**	**58**	**67**	**54**	**58**	**45**	**47**	-
Minn.	123	11	6	8	13	18	8	13	9	2	16	5	14	-
Iowa	94	6	8	7	14	6	12	5	8	5	7	3	13	-
Mo.	297	52	34	13	22	24	31	23	22	31	17	22	6	-
N. Dak.	7	-	-	-	-	2	1	1	1	1	-	1	-	-
S. Dak.	17	-	2	-	1	4	1	-	2	5	1	1	-	-
Nebr.	87	3	7	14	6	9	10	5	8	5	5	8	7	-
Kans.	110	14	7	10	3	9	10	11	17	5	12	5	7	-
S. Atlantic	**4,634**	**359**	**356**	**378**	**359**	**359**	**330**	**390**	**388**	**381**	**436**	**404**	**379**	**115**
Del.	118	14	-	1	14	5	13	8	19	16	17	3	8	-
Md.	764	65	63	59	66	60	52	69	62	62	70	69	66	1
D.C.	134	20	12	12	9	13	7	2	9	12	11	17	6	4
Va.	507	31	32	44	30	47	36	55	45	47	59	48	33	-
W. Va.	87	9	10	9	2	6	10	6	4	5	7	8	11	-
N.C.	381	38	26	38	27	28	30	24	38	35	24	39	34	-
S.C.	466	37	29	32	42	36	18	46	47	25	62	48	44	-
Ga.	820	40	70	75	81	82	64	59	60	55	75	69	90	-
Fla.	1,357	105	114	108	88	82	100	121	104	124	111	103	87	110
E.S. Central	**1,264**	**88**	**124**	**88**	**111**	**134**	**72**	**112**	**101**	**95**	**121**	**95**	**123**	-
Ky.	190	17	17	20	16	20	8	15	13	23	16	13	12	-
Tenn.	589	42	65	37	39	60	34	64	48	48	56	50	46	-
Ala.	381	29	36	21	44	44	23	27	36	19	40	21	41	-
Miss.	104	-	6	10	12	10	7	6	4	5	9	11	24	-
W.S. Central	**1,866**	**97**	**129**	**144**	**139**	**176**	**157**	**174**	**147**	**162**	**174**	**132**	**235**	-
Ark.	116	8	10	4	9	7	12	12	8	13	6	15	12	-
La.	349	12	18	29	23	31	29	22	32	28	23	26	76	-
Okla.	358	10	22	20	30	39	29	39	34	40	30	24	41	-
Tex.	1,043	67	79	91	77	99	87	101	73	81	115	67	106	-
Mountain	**834**	**49**	**48**	**95**	**71**	**64**	**64**	**63**	**63**	**69**	**58**	**89**	**101**	-
Mont.	15	1	1	4	-	1	2	1	-	2	-	2	1	-
Idaho	18	2	1	3	2	1	2	1	3	-	-	2	1	-
Wyo.	12	-	-	1	2	2	1	1	-	4	-	1	-	-
Colo.	197	11	9	19	15	15	26	21	15	16	8	21	21	-
N. Mex.	52	3	6	8	3	1	5	4	8	1	2	8	3	-
Ariz.	269	12	12	30	27	23	13	22	18	23	19	29	41	-
Utah	84	6	4	5	4	7	5	8	10	7	9	9	10	-
Nev.	187	14	15	25	18	14	10	5	9	16	20	17	24	-
Pacific	**4,616**	**335**	**319**	**492**	**341**	**384**	**433**	**296**	**375**	**465**	**363**	**393**	**420**	-
Wash.	358	20	26	41	49	49	30	16	35	19	29	17	27	-
Oreg.	295	26	18	32	21	20	21	32	22	25	26	32	20	-
Calif.	3,816	257	260	414	258	306	367	233	303	413	301	332	372	-
Alaska	60	6	5	2	5	4	8	5	7	5	2	10	1	-
Hawaii	87	26	10	3	8	5	7	10	8	3	5	2	-	-
Guam	6	-	-	1	-	-	1	-	-	-	1	1	2	-
P.R.	316	7	16	20	24	32	32	34	34	20	47	33	17	-
V.I.	9	2	2	-	-	-	-	-	2	3	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Cases represent patients tested for HBsAg and found to be positive.

HEPATITIS B—Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	22,177	64	97	120	193	1,977	5,244	4,516	4,294	1,753	1,439	1,431	1,049
New England	1,338	4	4	9	8	119	355	249	237	99	77	97	80
Maine	57	-	-	-	-	4	4	3	3	5	1	7	30
N.H.	43	-	-	-	1	7	14	6	9	3	3	-	-
Vt.	20	-	-	-	-	3	8	2	3	2	1	1	-
Mass.	535	-	4	7	4	51	138	100	108	35	30	37	21
R.I.	114	1	-	-	-	12	27	23	20	13	7	9	2
Conn.	569	3	-	2	3	42	164	115	94	41	35	43	27
Mid. Atlantic	4,022	7	14	20	30	371	995	883	770	336	260	291	45
N.Y. (excl NYC)	805	-	3	3	5	58	210	157	157	73	55	63	21
N.Y.C.	1,117[1]	4	7	8	11	87	267	244	227	102	65	88	7
N.J.	1,094	1	1	5	8	127	268	263	184	76	70	74	17
Pa.	1,006	2	3	4	6	99	250	219	202	85	70	66	-
E.N. Central	2,868	10	11	16	32	276	673	551	551	183	302	167	96
Ohio	777	3	3	3	6	86	192	167	144	53	37	50	33
Ind.	401	-	2	7	6	41	92	73	72	34	20	37	17
Ill.	690	2	1	5	7	58	161	108	127	7	183	5	26
Mich.	851	4	4	1	12	78	188	176	174	78	56	63	17
Wis.	149	1	1	-	1	13	40	27	34	11	6	12	3
W.N. Central	735	1	2	3	8	66	162	138	143	56	44	55	57
Minn.	123	1	-	1	1	5	30	35	26	6	8	8	2
Iowa	94	-	-	1	2	9	17	10	22	11	3	16	3
Mo.	297	-	-	1	4	23	58	47	52	23	20	20	49
N. Dak.	7	-	-	-	-	-	2	2	1	1	1	-	-
S. Dak.	17	-	-	-	-	2	2	4	4	1	2	2	-
Nebr.	87	-	1	-	-	13	19	16	19	8	5	5	1
Kans.	110	-	1	-	1	14	34	24	19	6	5	4	2
S. Atlantic	4,634	12	13	16	31	425	1,045	928	893	413	286	366	206
Del.	118	1	-	-	-	6	29	26	8	8	5	2	33
Md.	764	2	1	1	5	91	213	174	140	56	43	38	-
D.C.	134	-	-	-	-	1	18	14	24	16	6	5	50
Va.	507	1	2	1	2	52	135	98	80	43	42	36	15
W. Va.	87	-	-	-	-	7	14	16	15	17	6	10	2
N.C.	381	1	2	3	5	40	72	86	74	37	21	36	4
S.C.	466	3	1	2	1	48	80	102	99	36	24	25	45
Ga.	820	2	2	4	6	75	177	139	165	75	59	70	46
Fla.	1,357	2	5	5	12	105	307	273	288	125	80	144	11
E.S. Central	1,264	4	3	10	13	132	304	282	186	129	86	105	10
Ky.	190	-	-	-	3	16	54	41	36	12	8	17	3
Tenn.	589	2	3	8	5	55	134	116	103	62	41	58	2
Ala.	381	1	-	1	4	50	88	109	27	45	32	22	2
Miss.	104	1	-	1	1	11	28	16	20	10	5	8	3
W.S. Central	1,866	5	18	22	33	161	410	366	350	140	104	117	140
Ark.	116	-	1	1	5	8	23	18	17	5	8	11	19
La.	349	1	2	3	5	35	62	53	41	27	20	33	67
Okla.	358	-	8	3	6	41	81	69	84	20	19	12	15
Tex.	1,043	4	7	15	17	77	244	226	208	88	57	61	39
Mountain	834	8	3	7	7	52	155	178	172	64	58	51	79
Mont.	15	-	-	-	-	2	2	3	2	3	1	2	-
Idaho	18	-	-	-	-	-	6	3	4	4	-	-	1
Wyo.	12	1	-	-	-	1	3	-	2	1	1	2	1
Colo.	197	3	1	1	1	16	46	46	45	8	13	8	9
N. Mex.	52	-	-	1	1	5	8	13	11	5	4	3	1
Ariz.	269	3	-	-	3	15	39	64	62	26	27	23	7
Utah	84	1	-	4	1	4	15	26	21	6	2	2	2
Nev.	187	-	2	1	1	9	36	23	25	11	10	11	58
Pacific	4,616	13	29	17	31	375	1,145	941	992	333	222	182	336
Wash.	358	2	1	1	3	27	77	77	94	33	14	20	9
Oreg.	295	1	2	1	2	21	66	58	78	27	20	11	8
Calif.	3,816	9	24	13	24	313	965	783	794	255	174	145	317
Alaska	60	1	1	2	1	9	15	7	10	7	5	2	-
Hawaii	87	-	1	-	1	5	22	16	16	11	9	4	2
Guam	6	-	-	-	-	-	-	-	1	1	-	-	4
P.R.	316	2	-	2	6	69	91	59	40	16	10	4	17
V.I.	9	-	-	-	-	-	1	1	3	2	-	-	2
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Cases represent patients tested for HBsAg and found to be positive.

HEPATITIS

HEPATITIS NON-A NON-B — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**2,629**	**128**	**195**	**251**	**188**	**242**	**204**	**190**	**221**	**221**	**258**	**241**	**282**	**8**
New England	**83**	**5**	**12**	**5**	**6**	**6**	**11**	**9**	**4**	**2**	**6**	**4**	**13**	-
Maine	2	-	1	-	1	-	-	-	-	-	-	-	-	-
N.H.	8	-	2	1	2	-	1	1	-	-	1	-	-	-
Vt.	11	-	1	-	1	1	-	1	2	-	1	2	2	-
Mass.	24	2	4	2	1	2	9	3	-	-	-	1	-	-
R.I.	5	-	-	-	1	2	1	-	-	1	-	-	-	-
Conn.	33	3	4	2	-	1	-	4	2	1	4	1	11	-
Mid. Atlantic	**230**	**17**	**18**	**31**	**24**	**18**	**19**	**15**	**16**	**16**	**19**	**20**	**17**	-
N.Y. (excl. NYC)	88	7	4	10	4	8	7	1	4	8	7	14	14	-
N.Y.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.J.	142	10	14	21	20	10	12	14	12	8	12	6	3	-
Pa.							NA							
E.N. Central	**183**	**14**	**16**	**17**	**15**	**15**	**14**	**15**	**16**	**14**	**16**	**15**	**16**	-
Ohio	40	1	5	4	4	2	6	3	4	3	3	2	3	-
Ind.	32	2	2	5	4	6	1	2	2	2	1	3	2	-
Ill.	88	10	7	5	6	5	5	6	9	9	9	8	9	-
Mich.							NA							
Wis.	23	1	2	3	1	2	2	4	1	-	3	2	2	-
W.N. Central	**106**	**8**	**9**	**9**	**9**	**7**	**4**	**8**	**8**	**9**	**19**	**8**	**8**	-
Minn.	34	3	3	6	2	3	-	5	-	-	7	1	4	-
Iowa	17	1	3	-	2	1	-	1	2	2	4	1	-	-
Mo.	24	2	2	-	1	2	3	1	3	4	2	2	2	-
N. Dak.	2	-	-	-	-	-	-	-	1	1	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	5	-	-	-	-	1	1	1	1	-	1	-	-	-
Kans.	24	2	1	3	4	-	-	-	1	2	5	4	2	-
S. Atlantic	**535**	**26**	**52**	**55**	**37**	**44**	**40**	**41**	**37**	**42**	**48**	**57**	**48**	**8**
Del.	8	-	2	-	1	1	-	-	-	2	-	2	-	-
Md.	98	5	13	10	4	4	8	9	12	8	6	11	8	-
D.C.	5	-	-	2	-	1	1	-	-	-	-	-	1	-
Va.	87	1	12	6	7	7	3	11	6	5	9	11	9	-
W. Va.	12	1	-	2	-	-	-	1	2	-	1	4	1	-
N.C.							NN							
S.C.	26	2	2	1	1	2	2	4	-	2	5	2	3	-
Ga.	41	-	6	3	3	4	4	4	1	2	4	2	8	-
Fla.	258	17	17	31	21	25	22	12	16	23	23	25	18	8
E.S. Central	**154**	**10**	**14**	**8**	**15**	**13**	**6**	**8**	**20**	**10**	**29**	**9**	**12**	-
Ky.	14	3	-	1	-	-	1	-	2	1	2	2	2	-
Tenn.	77	3	6	4	7	5	3	5	11	6	14	5	8	-
Ala.	63	4	8	3	8	8	2	3	7	3	13	2	2	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. Central	**92**	**2**	**6**	**11**	**4**	**9**	**7**	**8**	**6**	**10**	**7**	**6**	**16**	-
Ark.	26	2	1	6	1	2	1	3	3	2	2	1	2	-
La.	27	-	3	3	1	1	4	1	2	4	-	2	6	-
Okla.	39	-	2	2	2	6	2	4	1	4	5	3	8	-
Tex.							NN							
Mountain	**208**	**18**	**16**	**19**	**15**	**21**	**18**	**7**	**18**	**16**	**16**	**21**	**23**	-
Mont.	2	-	-	-	-	-	-	-	-	-	-	2	-	-
Idaho	9	-	1	-	2	-	1	1	1	3	-	-	-	-
Wyo.	6	-	3	-	-	1	1	-	-	1	-	-	-	-
Colo.	30	-	3	1	3	2	3	1	2	4	4	1	6	-
N. Mex.	40	3	4	1	-	9	6	3	6	4	1	1	2	-
Ariz.	63	3	3	11	4	6	2	2	5	1	8	12	6	-
Utah	28	4	-	3	5	2	4	-	2	-	1	2	5	-
Nev.	30	8	2	3	1	1	1	-	2	3	2	3	4	-
Pacific	**1,038**	**28**	**52**	**96**	**63**	**109**	**85**	**79**	**96**	**102**	**98**	**101**	**129**	-
Wash.	94	2	2	10	13	16	7	6	12	7	4	3	12	-
Oreg.	75	8	6	7	5	6	6	7	3	5	9	6	7	-
Calif.	858	17	44	79	45	87	71	64	80	87	83	92	109	-
Alaska	2	-	-	-	-	-	-	1	-	-	-	-	1	-
Hawaii	9	1	-	-	-	-	1	1	1	3	2	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HEPATITIS NON-A NON-B — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**2,620**	**8**	**24**	**42**	**55**	**189**	**438**	**467**	**488**	**189**[1]	**228**[1]	**317**[1]	**184**
New England	**83**	-	**2**	**3**	**3**	**8**	**11**	**12**	**16**	**10**	**7**	**9**	**2**
Maine	2	-	-	-	-	-	-	-	-	-	-	1	1
N.H.	8	-	1	1	-	-	1	2	2	1	-	-	-
Vt.	11	-	-	1	1	1	1	1	3	2	1	-	-
Mass.	24	-	-	1	2	2	5	4	2	2	3	2	1
R.I.	5	-	1	-	-	1	-	1	1	-	-	1	-
Conn.	33	-	-	-	-	4	4	4	8	5	3	5	-
Mid. Atlantic	**230**	-	**3**	**3**	**7**	**14**	**40**	**35**	**44**	**16**	**22**	**44**	**2**
N.Y. (excl. NYC)	88	-	2	2	3	4	20	12	14	6	8	15	2
N.Y.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
N.J.	142	-	1	1	4	10	20	23	30	10	14	29	-
Pa.							NA						
E.N. Central	**183**	**1**	**2**	**3**	**3**	**14**	**28**	**27**	**30**	**8**[1]	**11**[1]	**21**[1]	**5**
Ohio	40	-	-	-	1	2	8	7	5	4	4	9	-
Ind.	32	-	-	-	-	3	6	6	3	1	4	9	-
Ill.	88	-	1	2	2	9	11	13	19		30		1
Mich.							NA						
Wis.	23	1	1	1	-	-	3	1	3	3	3	3	4
W.N. Central	**106**	-	**2**	**2**	**7**	**12**	**17**	**15**	**15**	**8**	**12**	**15**	**1**
Minn.	34	-	1	2	4	5	6	6	4	3	1	2	-
Iowa	17	-	-	-	1	1	1	1	3	-	5	5	-
Mo.	24	-	-	-	1	3	4	3	2	3	2	6	-
N. Dak.	2	-	-	-	-	-	1	-	1	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	5	-	-	-	-	1	-	1	1	-	1	1	-
Kans.	24	-	1	-	1	2	5	4	4	2	3	1	1
S. Atlantic	**535**	**2**	**3**	**8**	**7**	**41**	**88**	**78**	**96**	**44**	**65**	**100**	**3**
Del.	8	-	-	-	-	1	1	3	-	2	1	-	-
Md.	98	2	-	-	2	10	19	17	11	11	8	17	1
D.C.	5	-	-	-	-	1	2	1	1	-	-	-	-
Va.	87	-	2	1	2	7	14	9	13	7	10	21	1
W. Va.	12	-	-	1	-	-	-	5	2	-	2	1	1
N.C.							NN						
S.C.	26	-	-	2	1	2	4	3	6	1	4	3	-
Ga.	41	-	-	-	-	2	8	8	8	2	8	5	-
Fla.	258	-	1	4	2	18	40	32	55	21	32	53	-
E.S. Central	**154**	-	-	**3**	**5**	**11**	**19**	**22**	**33**	**13**	**16**	**31**	**1**
Ky.	14	-	-	1	-	1	4	-	1	1	[illegible]	4	-
Tenn.	77	-	-	2	3	3	6	13	17	6	9	18	-
Ala.	63	-	-	-	2	7	9	9	15	6	5	9	1
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. Central	**92**	-	**2**	**3**	**3**	**7**	**11**	**10**	**14**	**9**	**8**	**16**	**9**
Ark.	26	-	1	-	1	1	5	2	5	2	5	4	-
La.	27	-	-	1	2	1	3	3	2	3	1	7	4
Okla.	39	-	1	2	-	5	3	5	7	4	2	5	5
Tex.							NN						
Mountain	**208**	**4**	**2**	**3**	**6**	**13**	**29**	**44**	**39**	**8**	**23**	**19**	**18**
Mont.	2	-	-	-	-	-	-	-	1	-	-	-	1
Idaho	9	-	-	-	-	2	2	3	-	-	-	-	2
Wyo.	6	-	-	1	1	1	-	2	1	-	-	-	-
Colo.	30	-	-	1	-	1	4	5	6	1	6	5	1
N. Mex.	40	1	2	1	-	3	4	6	10	4	-	5	4
Ariz.	63	2	-	-	2	2	13	13	11	-	12	6	2
Utah	28	-	-	-	3	4	3	6	5	3	1	2	1
Nev.	30	1	-	-	-	-	3	9	5	-	4	1	7
Pacific	**1,038**	**1**	**8**	**14**	**14**	**69**	**195**	**224**	**201**	**73**	**64**	**62**	**113**
Wash.	94	-	-	1	1	6	16	20	20	7	6	9	8
Oreg.	75	-	-	-	1	4	10	14	22	6	6	9	3
Calif.	858	1	8	12	12	59	165	189	159	58	50	44	101
Alaska	2	-	-	-	-	-	1	-	-	-	-	-	1
Hawaii	9	-	-	1	-	-	3	1	-	2	2	-	-
Guam	-	-	-	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Does not include cases reported by state of Illinois.

HEPATITIS, UNSPECIFIED — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**8,664**	**640**	**679**	**800**	**682**	**689**	**721**	**696**	**688**	**743**	**728**	**681**	**756**	**52**
New England	**283**	21	21	27	18	7	31	27	24	18	25	13	31	-
Maine	4	-	-	1	1	-	1	-	-	-	-	1	-	-
N.H.	11	-	2	-	-	1	1	-	-	1	3	1	2	-
Vt.	3	2	-	-	-	-	1	-	-	-	-	-	-	-
Mass.	194	16	15	23	15	4	19	23	22	16	11	11	19	-
R.I.	1	-	-	-	-	1	-	-	-	-	-	-	-	-
Conn.	50	3	4	3	2	1	9	4	2	1	11	-	10	-
Mid. Atlantic	**878**	**90**	**86**	**84**	**77**	**80**	**70**	**69**	**68**	**62**	**52**	**66**	**62**	**22**
N.Y. (excl. NYC)	153	16	19	17	10	12	12	9	14	6	9	21	8	-
N.Y.C.	174[1]	13	10	20	20	16	14	5	17	15	13	9	22	-
N.J.	281	31	24	21	27	27	31	25	19	25	17	16	16	-
Pa.	270	30	33	26	20	25	13	20	18	16	13	18	16	22
E.N. Central	**771**	**85**	**62**	**81**	**90**	**63**	**73**	**41**	**66**	**63**	**57**	**45**	**56**	-
Ohio	226	10	19	34	30	14	22	11	21	20	17	14	14	-
Ind.	262	40	21	22	34	16	26	18	30	25	11	2	17	-
Ill.	98	12	6	10	11	8	11	2	5	2	11	10	8	-
Mich.	167	22	13	13	14	13	13	7	9	14	18	17	14	-
Wis.	20	1	3	2	1	2	1	3	1	2	-	2	2	-
W.N. Central	**174**	**20**	**11**	**17**	**12**	**21**	**11**	**22**	**14**	**17**	**15**	**9**	**5**	-
Minn.	15	3	-	1	1	1	2	4	2	-	1	-	-	-
Iowa	30	-	3	3	1	5	4	2	4	1	4	1	2	-
Mo.	95	12	8	6	10	8	3	12	7	12	9	6	2	-
N. Dak.	5	1	-	3	-	-	-	-	-	1	-	-	-	-
S. Dak.	1	-	-	-	-	-	-	1	-	-	-	-	-	-
Nebr.	12	-	-	2	-	6	1	2	-	-	-	1	-	-
Kans.	16	4	-	2	-	1	1	1	1	3	1	1	1	-
S. Atlantic	**1,097**	**73**	**80**	**97**	**103**	**98**	**100**	**105**	**109**	**98**	**70**	**63**	**71**	**30**
Del.	29	2	2	1	4	4	3	-	6	-	3	2	2	-
Md.	124	7	12	10	8	12	15	9	9	16	9	6	11	-
D.C.	15	1	1	1	2	1	1	1	2	1	2	1	1	-
Va.	104	6	6	15	11	12	5	7	7	14	9	4	8	-
W. Va.	9	2	1	2	-	-	1	-	1	2	-	-	-	-
N.C.	162	12	9	13	15	12	18	13	21	15	14	10	10	-
S.C.	86	4	7	11	5	4	5	14	17	11	4	3	1	-
Ga.	91	5	10	12	10	10	3	6	10	2	10	5	8	-
Fla.	477	34	32	32	48	43	49	55	36	37	19	32	30	30
E.S. Central	**138**	**18**	**9**	**5**	**13**	**17**	**12**	**6**	**18**	**9**	**12**	**2**	**17**	-
Ky.	34	3	2	1	4	5	4	1	4	3	4	-	3	-
Tenn.	47	5	2	-	3	6	2	4	7	2	4	1	11	-
Ala.	57	10	5	4	6	6	6	1	7	4	4	1	3	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. Central	**2,864**	**115**	**214**	**262**	**220**	**240**	**215**	**249**	**217**	**239**	**333**	**254**	**296**	-
Ark.	205	6	8	11	11	18	17	21	32	24	18	21	18	-
La.	288	9	26	32	30	21	32	17	28	19	10	38	26	-
Okla.	290	9	32	16	16	28	8	28	15	19	31	43	45	-
Tex.	2,071	91	148	203	163	173	158	183	142	177	274	152	207	-
Mountain	**627**	**51**	**66**	**56**	**64**	**45**	**40**	**33**	**35**	**58**	**38**	**78**	**63**	-
Mont.	6	-	-	-	1	-	-	1	3	1	-	-	-	-
Idaho	3	-	-	1	-	-	-	-	-	-	-	1	1	-
Wyo.	23	-	-	1	7	1	2	1	-	7	1	2	1	-
Colo.	84	9	13	4	8	4	8	7	3	9	8	4	7	-
N. Mex.	44	5	4	1	-	7	7	3	4	7	3	2	1	-
Ariz.	267	24	23	19	32	13	8	15	10	11	18	57	37	-
Utah	106	6	8	20	11	14	5	6	9	14	3	4	6	-
Nev.	94	7	18	10	5	6	10	-	6	9	5	8	10	-
Pacific	**1,762**	**176**	**130**	**171**	**85**	**128**	**169**	**154**	**137**	**179**	**126**	**151**	**156**	-
Wash.	95	7	3	4	4	6	11	13	8	10	12	11	6	-
Oreg.	24	1	3	-	-	4	3	6	1	2	1	2	1	-
Calif.	1,631	167	122	164	80	115	155	135	128	165	113	138	149	-
Alaska	2	-	-	1	-	-	-	-	-	1	-	-	-	-
Hawaii	10	1	2	2	1	3	-	-	-	1	-	-	-	-
Guam	10	6	-	-	-	-	1	2	-	-	-	1	-	-
P.R.	237	10	10	30	30	26	19	16	26	14	19	18	19	-
V.I.	2	-	-	-	-	-	-	-	3	-	-	-	-	-
Pac. Trust Terr.	71	-	2	2	3	2	3	7	6	6	2	21	17	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

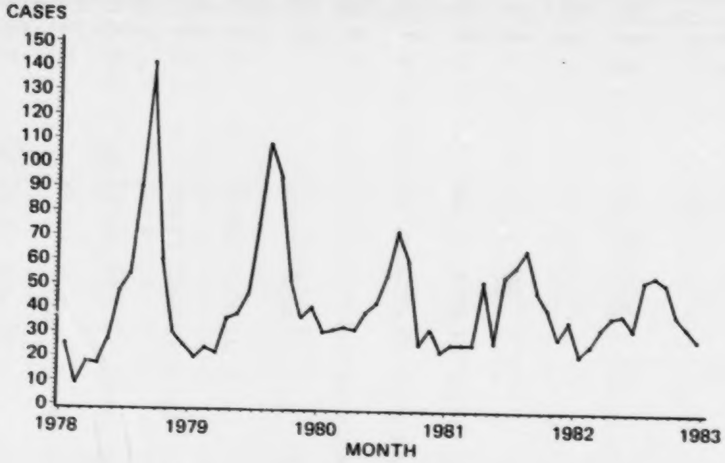
[1] Cases represent patients not tested for HBsAg.

HEPATITIS, UNSPECIFIED — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**8,664**	**29**	**268**	**653**	**498**	**895**	**1,654**	**1,436**	**1,270**	**481**[1]	**350**[1]	**542**[1]	**447**
New England	**263**	**2**	**3**	**4**	**10**	**21**	**61**	**42**	**40**	**19**	**22**	**22**	**17**
Maine	4	-	1	-	-	-	1	-	1	-	1	-	-
N.H.	11	-	-	-	2	-	3	-	-	2	3	1	-
Vt.	3	-	-	-	-	-	-	1	-	-	2	-	-
Mass.	194	2	1	3	8	20	45	33	27	13	11	15	16
R.I.	1	-	-	-	-	-	1	-	-	-	-	-	-
Conn.	50	-	1	1	-	1	11	8	12	4	5	6	1
Mid. Atlantic	**878**	**1**	**11**	**20**	**25**	**91**	**178**	**167**	**152**	**62**	**56**	**111**	**4**
N.Y. (excl. NYC)	153	-	4	2	6	16	29	18	29	10	15	20	4
N.Y.C.[2]	174	-	1	7	7	17	34	48	30	15	7	8	-
N.J.	281	1	2	2	5	24	74	43	63	20	15	32	-
Pa.	270	-	4	9	7	34	41	58	30	17	19	51	-
E.N. Central	**771**	**4**	**20**	**49**	**57**	**101**	**140**	**97**	**107**	**53**[1]	**30**[1]	**44**[1]	**28**
Ohio	226	3	10	20	17	37	37	25	30	14	8	17	8
Ind.	262	-	5	18	25	33	55	32	30	18	14	14	18
Ill.	96	1	-	2	3	11	15	9	13	41			1
Mich.	167	-	3	8	12	19	28	27	30	20	8	11	1
Wis.	20	-	2	1	-	1	5	4	4	1	-	2	-
W.N. Central	**174**	**2**	**3**	**2**	**10**	**14**	**33**	**25**	**35**	**15**	**13**	**12**	**10**
Minn.	15	-	-	-	1	2	7	1	2	2	-	-	-
Iowa	30	-	-	-	1	4	6	5	3	3	3	5	-
Mo.	95	2	2	2	8	4	13	13	23	7	6	6	9
N. Dak.	5	-	-	-	-	2	2	1	-	-	-	-	-
S. Dak.	1	-	-	-	-	-	1	-	-	-	-	-	-
Nebr.	12	-	1	-	-	1	-	1	4	2	2	1	-
Kans.	16	-	-	-	-	1	4	4	3	1	2	-	1
S. Atlantic	**1,097**	**3**	**13**	**41**	**42**	**127**	**257**	**210**	**167**	**72**	**52**	**93**	**20**
Del.	29	-	-	-	3	1	8	2	3	3	1	4	4
Md.	124	-	1	1	2	16	31	30	17	7	6	12	1
D.C.	15	-	-	2	2	2	3	2	2	2	-	-	-
Va.	104	-	-	1	4	14	32	10	15	7	8	11	2
W. Va.	9	-	-	-	1	1	1	2	3	-	-	1	-
N.C.	162	-	-	3	3	21	38	33	27	9	12	15	1
S.C.	86	2	-	3	3	6	24	16	12	3	6	5	6
Ga.	91	1	1	5	2	12	24	23	10	4	3	4	2
Fla.	477	-	11	26	22	54	96	92	78	37	16	41	4
E.S. Central	**138**	**-**	**2**	**5**	**5**	**12**	**22**	**23**	**30**	**9**	**11**	**14**	**5**
Ky.	34	-	1	2	3	-	3	8	7	-	2	3	5
Tenn.	47	-	1	3	2	2	8	7	11	2	3	8	-
Ala.	57	-	-	-	-	10	11	8	12	7	6	3	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. Central	**2,864**	**12**	**122**	**364**	**237**	**313**	**487**	**442**	**349**	**136**	**94**	**146**	**152**
Ark.	205	1	8	19	13	33	23	30	24	14	10	20	10
La.	288	1	3	17	14	27	48	47	41	23	9	8	50
Okla.	290	1	13	33	18	32	52	48	37	7	12	14	23
Tex.	2,071	9	98	295	192	221	364	317	247	92	63	104	69
Mountain	**627**	**2**	**47**	**56**	**45**	**59**	**120**	**103**	**99**	**26**	**19**	**19**	**32**
Mont.	6	-	-	-	-	2	-	1	-	-	-	1	2
Idaho	3	-	-	-	-	1	1	-	-	1	-	-	-
Wyo.	23	-	2	5	1	1	8	2	4	-	-	-	-
Colo.	84	-	4	2	2	8	11	17	23	5	8	2	2
N. Mex.	44	-	3	5	6	3	11	10	3	2	-	1	-
Ariz.	267	1	30	37	28	24	44	37	37	10	3	8	8
Utah	106	1	6	6	7	17	21	16	15	5	6	3	3
Nev.	94	-	2	1	1	3	24	20	17	3	2	4	17
Pacific	**1,762**	**3**	**47**	**112**	**67**	**157**	**356**	**327**	**291**	**89**	**53**	**81**	**179**
Wash.	95	-	-	1	1	5	17	29	16	7	4	10	5
Oreg.	24	-	1	1	1	2	5	6	5	2	-	-	1
Calif.	1,631	2	46	109	64	150	331	289	268	80	48	71	173
Alaska	2	-	-	-	-	-	-	1	1	-	-	-	-
Hawaii	10	1	-	1	1	-	3	2	1	-	1	-	-
Guam	10	-	-	-	-	-	1	3	1	-	1	1	3
P.R.	237	-	4	6	21	47	57	39	28	11	7	11	6
V.I.	2	-	-	-	-	-	-	-	1	1	-	-	-
Pac. Trust Terr.	71	NA											71
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Does not include cases reported by state of Illinois.
[2] Cases represent patients not tested for HBsAg.

LEGIONELLOSIS — Reported sporadic cases, by month of onset, United States, 1978-1982



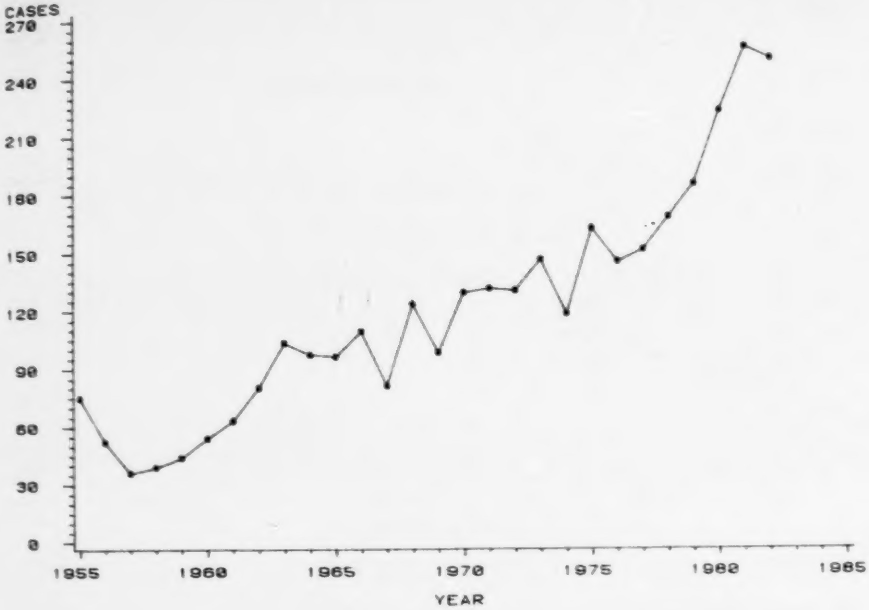
Sporadic cases of legionellosis with onset in 1982 continue to demonstrate trends apparent in earlier years regarding seasonality and age and sex distribution. Of the 455 sporadic cases reported, the number of cases peaked in the period July-September.

LEGIONELLOSIS — Age distribution of sporadic cases, United States, 1982

Age group	Number of cases	Percentage of total cases
0-9	5	1
10-19	8	2
20-29	22	5
30-39	48	11
40-49	56	12
50-59	92	20
60-69	127	28
70-79	62	14
80+	33	7
Unk.	2	
Total	455	100

The male-to-female ratio among the 1982 cases was 1.7:1. Almost 50% of the cases affected individuals in the 50-69 year groups.

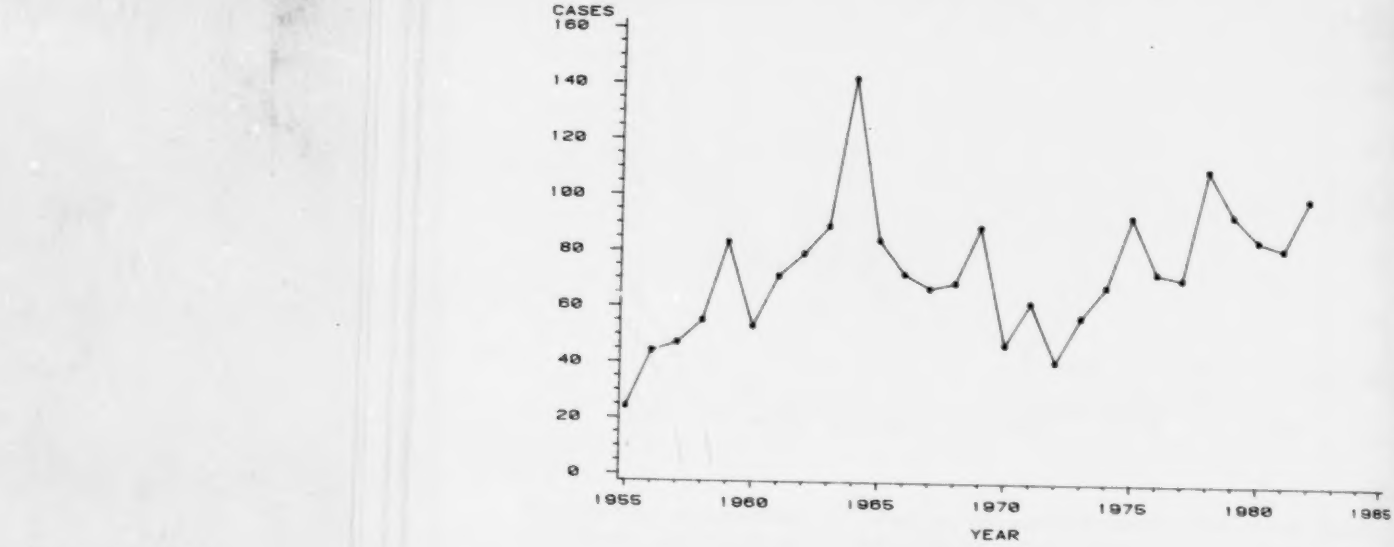
LEPROSY — Reported cases, by year, United States, 1955-1982



The reported occurrence of indigenously acquired leprosy has remained constant since 1970, with < 30 cases reported each year. The increase in the total number of reported cases is due entirely to a rise in the number of foreign-acquired cases rather than indigenous transmission. The sharp increase in reported cases in the period 1976-1981 corresponds with the influx of Southeast Asian refugees.

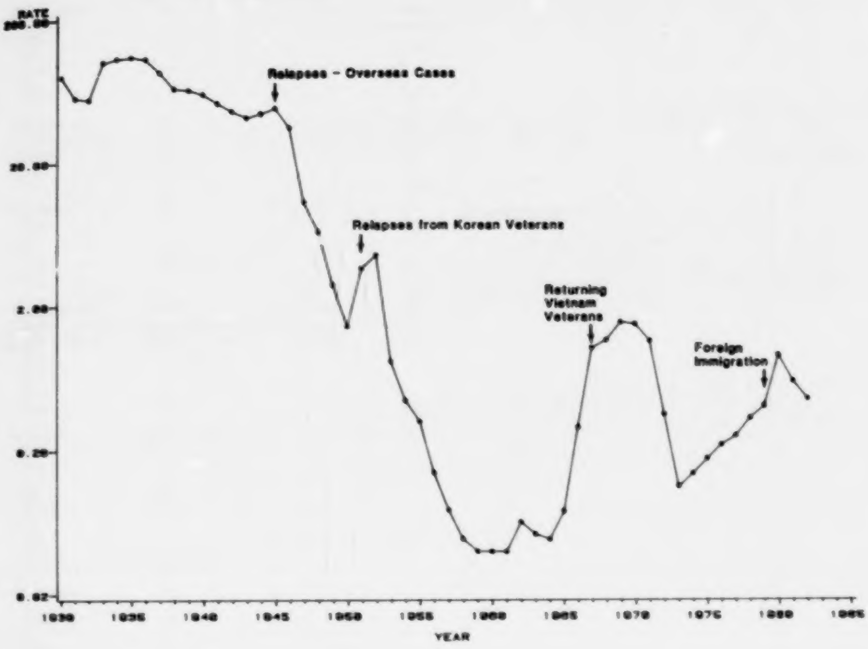
LEPTOSPIROSIS

LEPTOSPIROSIS — Reported cases, by year, United States, 1955-1982



For 1982, 100 cases of leptospirosis were reported. Although leptospirosis is usually considered an occupational disease, most reported cases are acquired during avocational activities. Exposure to multiple potential sources of infection is common, but the most probable sources of infection are water, livestock, and domestic pets. The peak in 1964 reflects large, water-related outbreaks involving a total of 76 persons.

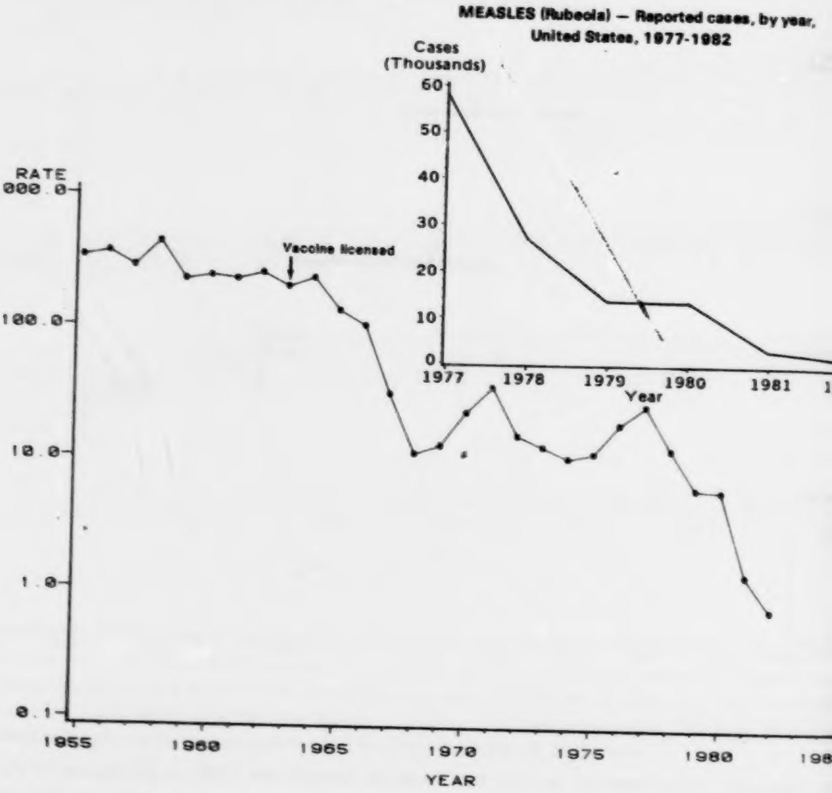
MALARIA — Reported cases per 100,000 population, by year, United States, 1930-1982



The decrease in the number of reported cases of malaria for 1982 is attributed to the continued decline in cases among foreign-born civilians who had acquired malaria before entry into the United States. Sixty-three percent of all malaria cases reported for 1982 were among foreign citizens, compared with 73% for 1981. Of the infections acquired in the United States, seven were congenital, nine were associated with blood transfusions, and one was an accidental laboratory-acquired infection.

MEASLES

MEASLES (Rubeola) — Reported cases per 100,000 population, by year, United States, 1955-1982



Measles incidence reached a record low in 1982, dropping for the first time belo 1/100,000 to 0.7/100,000 population. In 1982, a total of 1,714 cases were reported, decrease of 45.1% from 1981. These dramatic reductions in measles incidence followe the Childhood Immunization Initiative, which began in 1977, and the Measles Elimination Program, which began in 1978. Since the 1980-1981 school year, over 95% o entering school children have presented evidence of immunity to measles.* The high immunization levels are due in part to strict enforcement of school immunization laws.

As measles incidence has decreased, the seasonal pattern has been altered. The usual rise in numbers of cases in the spring months has been muted. In 1982, the greatest number of cases was reported in October, the first time that the peak occurrence was not in the late winter or spring.

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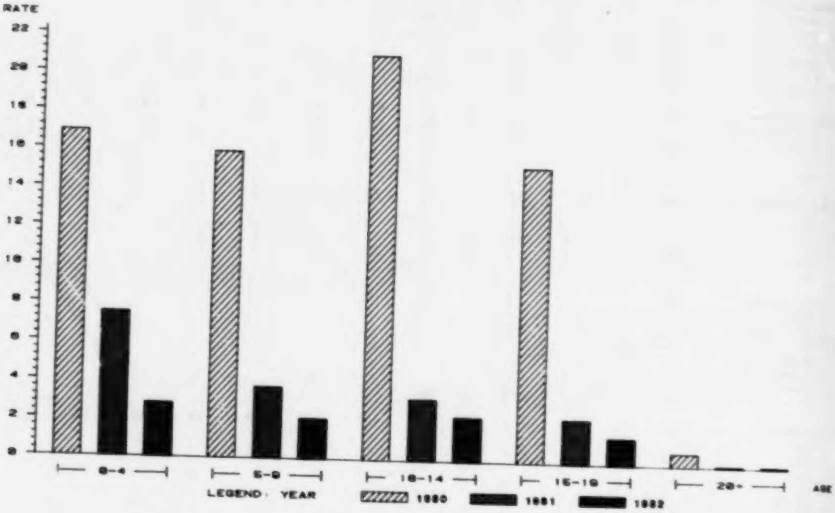
*Live vaccine on or after the first birthday or physician-diagnosed measles.

MEASLES (Rubeola) — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**1,714**	**37**	**39**	**136**	**247**	**225**	**252**	**153**	**88**	**99**	**260**	**107**	**69**	**2**
New England	**15**	**2**	-	**4**	**2**	**1**	**1**	-	**3**	**1**	-	-	**1**	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.H.	3	-	-	-	1	-	1	-	-	1	-	-	-	-
Vt.	2	2	-	-	-	-	-	-	-	-	-	-	-	-
Mass.	4	-	-	1	1	-	-	-	1	-	-	-	1	-
R.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conn.	6	-	-	3	-	1	-	-	2	-	-	-	-	-
Mid. Atlantic	**174**	**12**	**4**	**8**	**6**	**44**	**60**	**15**	**5**	**4**	**5**	**2**	**9**	-
N.Y. (excl. NYC)	112	7	3	3	2	38	43	8	5	-	3	-	-	-
N.Y.C.	49	3	1	5	4	2	15	7	-	4	1	1	6	-
N.J.	6	-	-	-	-	2	2	-	-	-	1	1	-	-
Pa.	7	2	-	-	-	2	-	-	-	-	-	-	3	-
E.N. Central	**89**	**2**	**3**	**17**	**9**	**1**	**26**	**8**	**8**	**3**	-	**1**	**11**	-
Ohio	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Ind.	2	1	-	-	-	1	-	-	-	-	-	-	-	-
Ill.	24	-	2	10	3	-	1	7	1	-	-	-	-	-
Mich.	62	1	1	7	6	-	24	1	7	3	-	1	11	-
Wis.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.N. Central	**49**	-	-	**2**	**7**	**35**	**2**	**3**	-	-	-	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mo.	2	-	-	1	1	-	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	3	-	-	-	-	-	-	3	-	-	-	-	-	-
Kans.	44	-	-	1	6	35	2	-	-	-	-	-	-	-
S. Atlantic	**271**	**10**	**6**	**7**	**8**	**2**	**6**	-	**3**	**12**	**126**	**78**	**11**	**2**
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	5	-	-	1	1	-	-	-	1	1	1	-	-	-
D.C.	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Va.	14	8	1	1	4	-	-	-	-	-	-	-	-	-
W. Va.	3	-	1	-	-	1	-	-	1	-	-	-	-	-
N.C.	2	-	-	-	-	-	-	-	-	-	1	-	1	-
S.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ga.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fla.	246	2	3	5	3	1	6	-	1	11	124	78	10	2
E.S. Central	**15**	**2**	**2**	-	**1**	**1**	**1**	**1**	-	-	**2**	-	**5**	-
Ky.	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Tenn.	6	1	2	-	1	-	1	1	-	-	-	-	-	-
Ala.	2	-	-	-	-	-	-	-	-	-	2	-	-	-
Miss.	6	-	-	-	-	1	-	-	-	-	-	-	5	-
W.S. Central	**175**	**1**	**1**	**2**	**1**	**2**	**5**	**1**	**24**	**7**	**106**	**17**	**8**	-
Ark.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
La.	16	-	-	-	-	-	2	-	-	-	-	8	6	-
Okla.	30	-	-	-	-	-	-	-	21	6	3	-	-	-
Tex.	129	1	1	2	1	2	3	1	3	1	103	9	2	-
Mountain	**29**	-	-	-	-	-	**6**	**2**	**3**	**10**	**8**	-	-	-
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyo.	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Colo.	8	-	-	-	-	-	5	1	2	-	-	-	-	-
N. Mex.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ariz.	17	-	-	-	-	-	-	1	1	10	5	-	-	-
Utah	3	-	-	-	-	-	-	-	-	-	3	-	-	-
Nev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	**897**	**8**	**23**	**96**	**213**	**139**	**145**	**123**	**42**	**62**	**13**	**9**	**24**	-
Wash.	42	-	14	-	1	9	6	6	3	1	1	-	1	-
Oreg.	17	-	-	-	-	-	3	3	-	6	4	1	-	-
Calif.	831	7	8	96	211	130	133	114	38	55	8	8	23	-
Alaska	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Hawaii	6	1	1	-	1	-	2	-	1	-	-	-	-	-
Guam	9	-	-	-	3	2	1	-	-	-	-	1	2	-
P.R.	224	16	21	11	13	12	11	10	21	15	9	46	39	-
V.I.	2	-	-	-	-	-	-	-	-	-	-	-	2	-
Pac. Trust Terr.	1	-	-	-	-	-	-	-	-	-	1	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MEASLES (Rubeola) — Reported cases per 100,000 population, by age group,* United States, 1980-1982



*Rates estimated by extrapolating age distribution of patients with age reported to the entire number of reported cases.

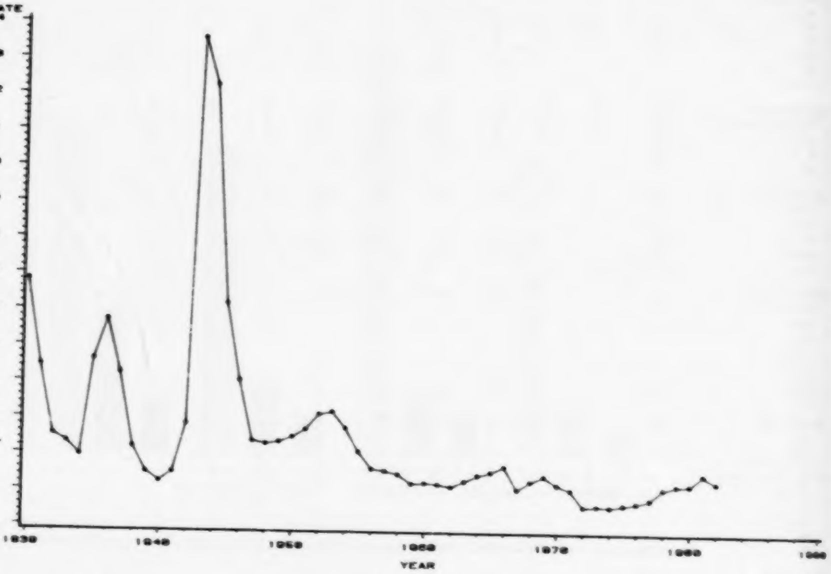
Estimated measles incidence has declined in all age groups. However, the greatest decreases have been among young school-age children. As a result, the highest estimated incidence in 1982 was for preschoolers, i.e., 2.8 cases/100,000 population.

MEASLES — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**1,714**	**118**	**371**	**326**	**402**	**279**	**92**	**51**	**42**	**11**	**3**	**2**	**17**
New England	**15**	**1**	**3**	**4**	**3**	**3**	-	-	**1**	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-
N.H.	3	1	-	2	-	-	-	-	-	-	-	-	-
Vt.	2	-	1	1	-	-	-	-	-	-	-	-	-
Mass.	4	-	1	-	2	1	-	-	-	-	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	-	-	-	-
Conn.	6	-	1	1	1	2	-	-	1	-	-	-	-
Mid Atlantic	**174**	**9**	**40**	**27**	**22**	**53**	**7**	**5**	**8**	**2**	-	**1**	-
N.Y. (excl. NYC)	112	4	13	18	17	46	4	2	7	-	-	1	-
N.Y.C.	49	5	24	8	2	2	3	2	1	2	-	-	-
N.J.	6	-	-	-	2	4	-	-	-	-	-	-	-
Pa.	7	-	3	1	1	1	-	1	-	-	-	-	-
E.N. Central	**89**	**8**	**10**	**26**	**13**	**24**	**2**	**1**	**3**	-	**1**	-	**1**
Ohio	1	-	-	1	-	-	-	-	-	-	-	-	-
Ind.	2	-	-	1	-	-	-	-	1	-	-	-	-
Ill.	24	2	3	6	8	1	1	1	1	-	-	-	1
Mich.	62	6	7	18	5	23	1	-	1	-	1	-	-
Wis.	-	-	-	-	-	-	-	-	-	-	-	-	-
W.N. Central	**49**	**1**	**7**	**14**	**22**	**4**	**1**	-	-	-	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-	-
Mo.	2	-	1	1	-	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	3	-	-	3	-	-	-	-	-	-	-	-	-
Kans.	44	1	6	10	22	4	1	-	-	-	-	-	-
S. Atlantic	**271**	**4**	**47**	**64**	**110**	**20**	**8**	**6**	**7**	**4**	**1**	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	5	-	-	4	-	-	1	-	-	-	-	-	-
D.C.	1	-	-	-	-	1	-	-	-	-	-	-	-
Va.	14	2	2	3	5	1	1	-	-	-	-	-	-
W. Va.	3	2	-	1	-	-	-	-	-	-	-	-	-
N.C.	2	-	-	1	-	1	-	-	-	-	-	-	-
S.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ga.	-	-	-	-	-	-	-	-	-	-	-	-	-
Fla.	246	-	45	55	105	17	6	6	7	4	1	-	-
E.S. Central	**15**	-	**9**	**1**	**2**	**1**	**1**	-	-	**1**	-	-	-
Ky.	1	-	-	1	-	-	-	-	-	-	-	-	-
Tenn.	6	-	4	-	-	-	1	-	-	1	-	-	-
Ala.	2	-	-	-	2	-	-	-	-	-	-	-	-
Miss.	6	-	5	-	-	1	-	-	-	-	-	-	-
W.S. Central	**175**	**7**	**30**	**7**	**20**	**82**	**24**	**2**	**1**	-	-	-	**2**
Ark.	-	-	-	-	-	-	-	-	-	-	-	-	-
La.	16	-	1	2	10	-	-	1	-	-	-	-	2
Okla.	30	1	19	5	4	-	-	-	1	-	-	-	-
Tex.	129	6	10	-	6	82	24	1	-	-	-	-	-
Mountain	**29**	**2**	**3**	**8**	**5**	**7**	**1**	**2**	**1**	-	-	-	-
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyo.	1	-	-	-	-	-	1	-	-	-	-	-	-
Colo.	8	1	-	-	-	6	-	1	-	-	-	-	-
N. Mex.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ariz.	17	1	2	8	4	-	-	1	1	-	-	-	-
Utah	3	-	1	-	1	1	-	-	-	-	-	-	-
Nev.	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	**897**	**86**	**222**	**175**	**205**	**85**	**48**	**35**	**21**	**4**	**1**	**1**	**14**
Wash.	42	2	7	15	6	4	2	3	3	-	-	-	-
Oreg.	17	2	3	5	5	1	-	-	1	-	-	-	-
Calif.	831	80	210	155	193	80	45	31	17	4	1	1	14
Alaska	1	-	-	-	-	-	1	-	-	-	-	-	-
Hawaii	6	2	2	-	1	-	-	1	-	-	-	-	-
Guam	9	-	6	1	2	-	-	-	-	-	-	-	-
P.R.	224	42	56	44	43	23	3	5	4	1	-	-	3
V.I.	2	-	-	2	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	1	NA											1
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

MENINGOCOCCAL INFECTIONS

MENINGOCOCCAL INFECTIONS (total) — Reported cases per 100,000 population, by year, United States, 1930-1982



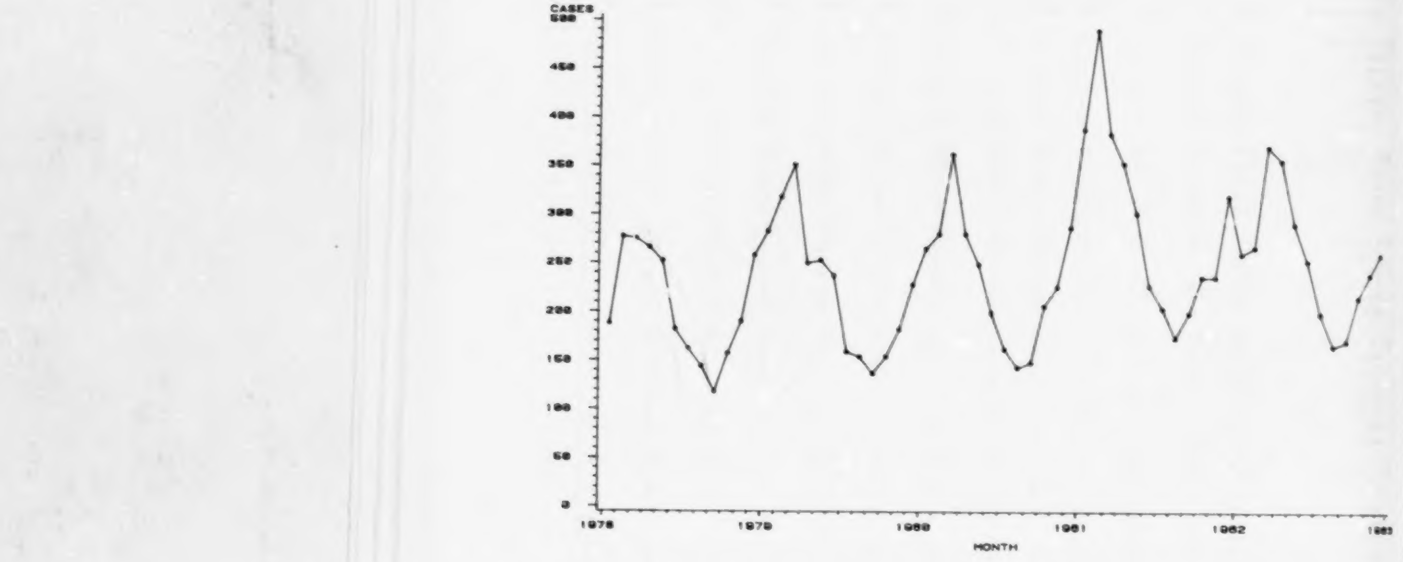
For 1982, 3,056 cases of meningococcal infection were reported. The incidence of reported meningococcal infections, by state, ranged from 0.0 to 3.21 cases/100,000 population. Age-specific rates for reported cases showed a peak rate of 19.3 cases/100,000 among infants < 1 year of age, declining to 5.9 cases/100,000 among children 1-4 years of age. Approximately 49% of reported cases affected children < 5 years of age.

MENINGOCOCCAL INFECTIONS (Total) — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**3,056**	**260**	**267**	**370**	**356**	**291**	**253**	**199**	**166**	**171**	**216**	**240**	**261**	**6**
New England	**179**	**14**	**13**	**18**	**21**	**18**	**13**	**15**	**6**	**12**	**11**	**19**	**19**	-
Maine	17	2	1	-	-	-	3	1	2	3	-	3	2	-
N.H.	21	3	2	3	2	1	2	2	-	-	-	3	3	-
Vt.	13	1	-	2	2	-	2	-	-	1	1	2	2	-
Mass.	55	3	4	4	6	7	4	7	2	4	3	7	4	-
R.I.	16	1	1	6	1	2	-	-	-	2	3	-	-	-
Conn.	57	4	5	3	10	8	2	5	2	2	4	4	8	-
Mid. Atlantic	**541**	**38**	**50**	**48**	**69**	**36**	**70**	**29**	**38**	**19**	**39**	**53**	**51**	**1**
N.Y. (excl. NYC)	179	7	15	11	18	11	41	11	21	6	9	17	12	-
N.Y.C.	104	7	9	9	14	8	7	4	11	5	12	6	12	-
N.J.	112	12	12	10	12	6	13	6	5	3	8	13	12	-
Pa.	146	12	14	18	25	11	9	8	1	5	10	17	15	1
E.N. Central	**467**	**35**	**34**	**62**	**51**	**50**	**28**	**21**	**20**	**38**	**44**	**46**	**38**	-
Ohio	134	6	7	29	15	14	9	7	2	7	13	13	12	-
Ind.	48	1	1	5	8	6	5	-	-	4	4	6	8	-
Ill.	131	13	10	16	15	17	5	6	8	8	11	8	14	-
Mich.	81	7	10	6	8	5	4	5	8	8	11	8	1	-
Wis.	73	8	6	6	5	8	5	3	2	11	5	11	3	-
W.N. Central	**148**	**15**	**8**	**18**	**9**	**15**	**10**	**8**	**7**	**12**	**19**	**14**	**13**	-
Minn.	36	4	1	3	2	4	4	1	2	2	4	4	5	-
Iowa	13	1	2	1	1	-	-	-	-	4	3	-	1	-
Mo.	40	7	3	5	1	4	1	4	-	3	6	4	2	-
N. Dak.	6	1	1	2	-	1	1	-	-	-	-	-	-	-
S. Dak.	11	-	-	1	-	2	-	1	-	-	2	2	3	-
Nebr.	15	-	-	3	1	1	4	-	3	-	1	1	1	-
Kans.	27	2	1	3	4	3	-	2	2	3	3	3	1	-
S. Atlantic	**615**	**51**	**59**	**67**	**71**	**64**	**32**	**43**	**44**	**41**	**46**	**46**	**46**	**5**
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	44	4	1	1	8	4	-	3	5	4	3	5	6	-
D.C.	5	-	-	-	-	2	-	1	-	-	1	1	-	-
Va.	72	4	5	6	8	9	4	6	7	5	7	6	5	-
W. Va.	10	1	2	4	-	-	-	-	1	1	-	1	-	-
N.C.	114	6	14	8	10	17	13	9	4	11	8	8	6	-
S.C.	70	7	4	10	6	9	3	3	9	1	8	6	4	-
Ga.	118	15	12	21	13	5	5	12	2	7	8	8	10	-
Fla.	182	14	21	17	26	18	7	9	16	12	11	11	15	5
E.S. Central	**175**	**18**	**13**	**24**	**21**	**22**	**20**	**6**	**11**	**6**	**9**	**11**	**14**	-
Ky.	25	1	1	1	8	3	6	-	4	-	1	-	-	-
Tenn.	79	9	5	11	6	10	7	6	4	5	3	5	8	-
Ala.	56	8	6	11	4	8	5	-	1	1	4	4	4	-
Miss.	15	-	1	1	3	1	2	-	2	-	1	2	2	-
W.S. Central	**357**	**29**	**35**	**54**	**43**	**32**	**22**	**27**	**23**	**15**	**16**	**22**	**39**	-
Ark.	17	3	2	1	1	2	1	1	1	1	2	-	2	-
La.	67	3	1	13	7	8	3	5	8	7	2	2	8	-
Okla.	35	3	3	2	1	4	3	7	1	-	3	3	5	-
Tex.	238	20	29	38	34	18	15	14	13	7	9	17	24	-
Mountain	**123**	**16**	**14**	**25**	**18**	**9**	**4**	**9**	**3**	**4**	**7**	**8**	**6**	-
Mont.	8	4	-	1	-	-	-	-	-	-	2	1	-	-
Idaho	7	1	2	2	-	1	-	-	-	1	-	-	-	-
Wyo.	6	-	2	1	1	-	1	-	-	-	-	-	1	-
Colo.	51	6	7	6	9	5	3	5	-	1	2	4	3	-
N. Mex.	15	1	-	7	2	2	-	2	-	-	1	-	-	-
Ariz.	21	2	2	6	3	-	-	2	2	1	1	2	-	-
Utah	12	1	-	2	3	1	-	-	1	1	-	1	2	-
Nev.	3	1	1	-	-	-	-	-	-	-	1	-	-	-
Pacific	**451**	**44**	**41**	**54**	**53**	**45**	**54**	**41**	**14**	**24**	**25**	**21**	**35**	-
Wash.	56	7	5	8	4	3	5	5	3	5	6	1	4	-
Oreg.	85	13	3	8	11	13	12	6	2	2	5	2	8	-
Calif.	292	21	28	37	35	28	35	30	8	16	14	18	22	-
Alaska	13	2	3	1	2	1	2	-	-	1	-	-	1	-
Hawaii	5	1	2	-	1	-	-	-	1	-	-	-	-	-
Guam	2	-	1	-	-	1	-	-	-	-	-	-	-	-
P.R.	13	2	-	2	1	-	2	-	1	-	1	-	4	-
V.I.	2	-	-	-	-	-	-	-	1	1	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MENINGOCOCCAL INFECTIONS

MENINGOCOCCAL INFECTIONS (total) — Reported cases, by month, United States, 1978-1982



Meningococcal disease continues to exhibit seasonality, with the peak of reported cases in late winter and early spring.

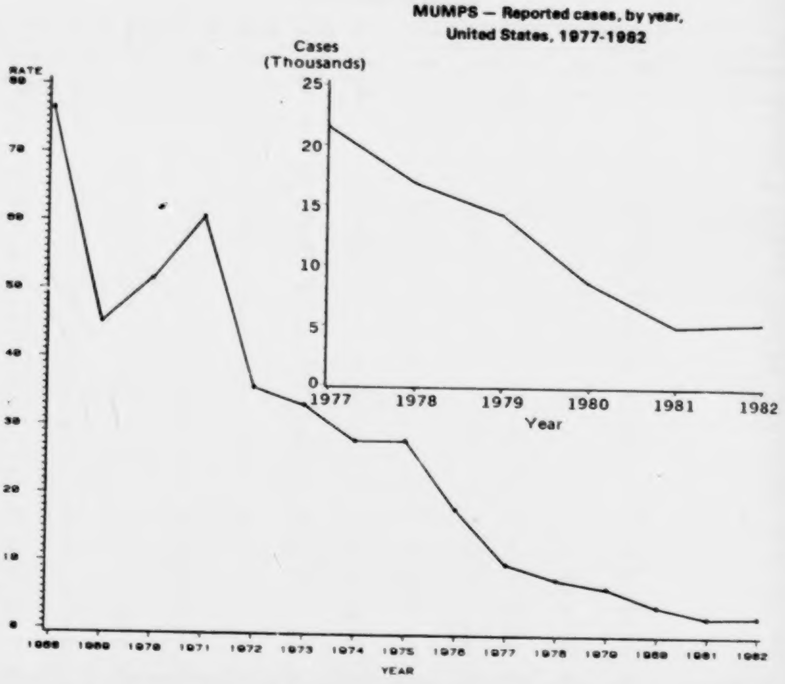
MENINGOCOCCAL INFECTIONS (Total) — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	3,056	702	810	201	150	242	189	92	145	110[1]	111[1]	221[1]	91
New England	179	38	42	6	7	10	9	7	7	7	6	27	13
Maine	17	3	2	-	-	1	-	-	-	-	-	-	11
N.H.	21	6	4	1	2	1	2	-	-	2	2	1	-
Vt.	13	1	6	-	-	1	3	-	-	1	-	1	-
Mass.	55	14	13	2	1	4	-	3	3	-	1	14	-
R.I.	16	5	3	1	1	-	-	-	-	-	1	5	-
Conn.	57	9	14	2	3	3	4	4	4	4	2	6	2
Mid. Atlantic	541	111	116	44	33	57	33	13	39	25	30	38	2
N.Y. (excl. NYC)	179	47	37	9	13	15	12	4	10	7	7	17	1
N.Y.C.	104	17	18	12	8	10	4	5	14	3	7	6	-
N.J.	112	13	30	9	7	14	6	2	9	7	8	7	-
Pa.	146	34	31	14	5	18	11	2	6	8	8	8	1
E.N. Central	467	122	131	25	22	37	27	15	17	12[1]	16[1]	22[1]	9
Ohio	134	41	42	8	4	10	5	4	3	3	3	8	3
Ind.	48	11	12	4	4	4	3	2	2	1	-	4	1
Ill.	131	40	36	8	3	13	9	3	6	……	12	……	1
Mich.	81	17	15	3	3	7	6	2	5	5	8	7	3
Wis.	73	13	26	2	8	3	4	4	1	3	5	3	1
W.N. Central	148	28	45	7	5	17	12	3	9	2	3	7	10
Minn.	36	12	12	-	1	3	1	-	1	1	-	5	-
Iowa	13	1	2	2	-	4	1	-	3	-	-	-	-
Mo.	40	3	16	4	-	2	2	1	2	1	3	-	6
N. Dak.	6	2	1	-	-	-	3	-	-	-	-	-	-
S. Dak.	11	3	5	-	-	1	-	1	1	-	-	-	-
Nebr.	15	3	2	-	2	4	1	-	1	-	-	2	-
Kans.	27	4	7	1	2	3	4	1	1	-	-	-	4
S. Atlantic	615	145	165	46	41	44	37	18	22	18	21	39	19
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	44	14	9	2	3	1	4	1	3	2	3	2	-
D.C.	5	-	2	-	1	-	-	-	1	-	1	-	-
Va.	72	29	15	7	2	6	2	3	3	1	-	4	-
W. Va.	10	4	2	1	1	-	-	-	-	-	-	2	-
N.C.	114	28	33	7	12	6	3	3	5	4	4	8	1
S.C.	70	16	18	3	5	6	5	-	2	4	-	3	8
Ga.	118	30	27	13	7	11	9	1	2	2	3	4	9
Fla.	182	24	59	13	10	14	14	10	6	5	10	16	1
E.S. Central	175	48	49	16	8	14	5	4	3	7	5	16	-
Ky.	25	8	12	3	-	-	-	1	-	-	-	1	-
Tenn.	79	20	16	8	5	8	2	3	2	3	4	8	-
Ala.	56	18	14	3	3	5	3	-	1	3	1	5	-
Miss.	15	2	7	2	-	1	-	-	-	1	-	2	-
W.S. Central	357	67	113	23	15	22	20	7	17	17	12	26	18
Ark.	17	2	7	2	1	-	-	2	-	1	-	2	-
La.	67	19	19	2	1	-	7	2	2	2	4	6	3
Okla.	35	2	8	2	2	3	4	1	3	3	-	4	3
Tex.	238	44	79	17	11	19	9	2	12	11	8	14	12
Mountain	123	41	27	4	4	8	5	4	10	7	2	4	7
Mont.	8	5	1	1	-	-	-	-	-	-	-	-	1
Idaho	7	3	4	-	-	-	-	-	-	-	-	-	-
Wyo.	6	3	2	-	1	-	-	-	-	-	-	-	-
Colo.	51	20	9	1	1	4	4	3	4	4	-	-	1
N. Mex.	15	3	2	-	1	2	-	-	1	1	-	2	3
Ariz.	21	5	4	-	1	2	1	-	5	1	1	1	-
Utah	12	2	3	2	-	-	-	1	-	1	1	1	1
Nev.	3	-	2	-	-	-	-	-	-	-	-	-	1
Pacific	451	102	122	30	15	33	21	21	21	15	16	42	13
Wash.	56	12	15	5	3	1	2	2	1	-	1	8	6
Oreg.	85	16	32	3	3	10	3	4	3	3	3	5	-
Calif.	292	70	69	22	8	21	15	15	15	12	11	28	6
Alaska	13	3	5	-	1	1	-	-	2	-	-	-	1
Hawaii	5	1	1	-	-	-	1	-	-	-	1	1	-
Guam	2	-	1	-	-	1	-	-	-	-	-	-	-
P.R.	13	1	4	1	1	2	1	-	-	-	2	1	-
V.I.	2	-	2	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Does not include cases reported by state of Illinois.

MUMPS

MUMPS — Reported cases per 100,000 population, by year, United States, 1968-1982



In 1982, a total of 5,270 cases of mumps were reported to CDC, an incidence of 2.5 cases/100,000 population. This figure is 7% higher than the 1981 total of 4,941 cases, the lowest reported incidence since mumps became a nationally notifiable disease in 1968. The small increase in 1982 was principally the result of increased numbers of cases of mumps disease in Ohio. Ohio, which does not require mumps vaccination for school attendance, experienced more than a 2-fold rise in the number of cases from 1981 to 1982, while the number of cases in all other states declined by 17.8%. In 1982, the incidence of mumps in the 19 states that did not require proof of mumps vaccination for school attendance (3.5/100,000 population) was about twice as high as that in states that did require vaccination (1.8/100,000).

Approximately three-fourths of persons who had mumps and whose ages were reported in 1982 were <15 years of age. In contrast to 1980 and 1981 when the highest age-specific incidence was for persons 5-9 years of age, in 1982 the highest incidence was for 10-14 year olds, which alone accounted for almost 40% of all cases with age reported. Children 5-9 years of age had the next highest incidence of disease, accounting for 27% of cases. The 1982 increase in incidence for persons 10-19 years of age is largely due to cases reported from Ohio, which accounted for almost one-half of all cases in this age group. Although the reported incidence for 15-19 year olds in 1982 (4.2/100,000) rose slightly from the 1980 figure (3.5/100,000), the 1982 incidence still represents a substantial decrease from that of the prevaccine era.

MUMPS — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**5,270**	**305**	**482**	**883**	**784**	**753**	**581**	**193**	**104**	**159**	**241**	**290**	**436**	**59**
New England	**189**	**43**	**23**	**31**	**27**	**10**	**7**	**9**	**7**	**6**	**7**	**8**	**11**	-
Maine	42	8	7	6	6	4	1	2	1	1	2	2	2	-
N.H.	18	2	4	2	4	1	-	-	-	2	2	1	-	-
Vt.	7	3	-	1	-	-	1	1	1	-	-	-	-	-
Mass.	75	27	5	16	13	2	2	2	3	2	-	1	2	-
R.I.	18	1	4	2	3	1	2	1	1	-	1	1	1	-
Conn.	29	2	3	4	1	2	1	3	1	1	2	3	6	-
Mid. Atlantic	**364**	**25**	**49**	**39**	**72**	**43**	**27**	**15**	**7**	**15**	**19**	**34**	**19**	-
N.Y. (excl. NYC)	100	6	11	8	11	3	11	7	2	4	11	16	10	-
N.Y.C.	47	6	2	9	10	5	5	4	2	2	1	-	1	-
N.J.	57	2	7	10	9	3	6	1	1	3	3	9	3	-
Pa.	160	11	29	12	42	32	5	3	2	6	4	9	5	-
E.N. Central	**2,680**	**118**	**263**	**682**	**445**	**406**	**252**	**47**	**22**	**34**	**82**	**119**	**210**	-
Ohio	1,775	60	158	500	328	309	176	21	4	10	28	42	139	-
Ind.	48	5	7	6	4	5	4	3	1	-	-	6	7	-
Ill.	315	4	23	83	57	40	29	5	9	7	16	21	21	-
Mich.	410	36	26	85	52	48	32	11	4	9	27	47	33	-
Wis.	132	13	49	8	4	4	11	7	4	8	11	3	10	-
W.N. Central	**646**	**8**	**10**	**26**	**106**	**155**	**184**	**42**	**5**	**24**	**12**	**39**	**35**	-
Minn.	455	-	3	-	72	122	175	40	4	21	5	11	2	-
Iowa	65	5	5	5	6	6	2	-	1	1	3	17	14	-
Mo.	13	3	1	2	1	-	1	1	-	1	1	2	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	1	-	-	-	1	-	-	-	-	-	-	-	-	-
Nebr.	1	-	-	-	-	-	-	-	-	-	-	1	-	-
Kans.	111	-	1	19	26	27	6	1	-	1	3	8	19	-
S. Atlantic	**286**	**38**	**23**	**41**	**28**	**32**	**12**	**8**	**11**	**15**	**26**	**8**	**44**	-
Del.	13	1	2	1	3	3	-	-	1	1	-	-	1	-
Md.	34	2	3	5	2	6	4	2	1	4	1	2	2	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	44	4	6	6	6	7	1	1	2	-	5	1	5	-
W. Va.	124	25	10	26	9	8	1	2	7	2	7	2	25	-
N.C.	23	2	2	-	1	2	3	1	-	2	6	1	3	-
S.C.	18	2	-	3	4	2	1	1	-	2	2	-	1	-
Ga.	30	2	-	-	3	4	2	1	-	4	5	2	7	-
Fla.								NN						
E.S. Central	**68**	**3**	**8**	**6**	**8**	**2**	**3**	**7**	**4**	**8**	**6**	**9**	**4**	-
Ky.	22	1	3	3	2	-	-	3	2	2	2	2	2	-
Tenn.	25	1	3	2	3	2	-	3	1	4	3	3	-	-
Ala.	10	-	1	1	2	-	1	-	1	2	1	-	1	-
Miss.	11	1	1	-	1	-	2	1	-	-	-	4	1	-
W.S. Central	**270**	**12**	**28**	**13**	**32**	**36**	**14**	**17**	**11**	**14**	**34**	**16**	**43**	-
Ark.	9	2	1	-	2	1	-	-	-	1	-	-	2	-
La.	6	-	-	1	2	-	-	2	-	1	-	-	-	-
Okla.								NN						
Tex.	255	10	27	12	28	35	14	15	11	12	34	16	41	-
Mountain	**132**	**10**	**13**	**10**	**8**	**13**	**8**	**13**	**10**	**7**	**11**	**12**	**17**	-
Mont.	8	2	-	1	-	-	-	-	-	-	1	2	2	-
Idaho	5	2	-	-	-	-	1	-	-	1	-	-	1	-
Wyo.	2	-	1	1	-	-	-	-	-	-	-	-	-	-
Colo.	22	1	3	4	2	-	3	-	2	2	-	2	3	-
N. Mex.								NN						
Ariz.	63	3	4	3	3	9	2	9	2	3	9	7	9	-
Utah	24	1	4	1	3	4	-	3	5	1	-	-	2	-
Nev.	8	1	1	-	-	-	2	1	1	-	1	1	-	-
Pacific	**635**	**48**	**65**	**35**	**58**	**56**	**74**	**35**	**27**	**36**	**44**	**45**	**53**	**59**
Wash.	102	12	5	16	6	9	10	3	-	3	5	11	22	-
Oreg.								NN						
Calif.	496	36	56	18	48	43	63	31	26	27	32	30	27	59
Alaska	16	-	3	1	2	-	-	-	-	2	2	2	4	-
Hawaii	21	-	1	-	2	4	1	1	1	4	5	2	-	-
Guam	5	1	-	-	-	-	2	-	-	2	-	-	-	-
P.R.	103	5	8	6	14	8	7	4	12	16	12	6	5	-
V.I.	4	-	-	-	-	-	-	-	1	2	1	-	-	-
Pac. Trust Terr.	3	-	-	-	1	-	1	-	1	-	-	-	-	-
C.N.M.I.	1	-	-	-	-	-	-	-	-	-	1	-	-	-

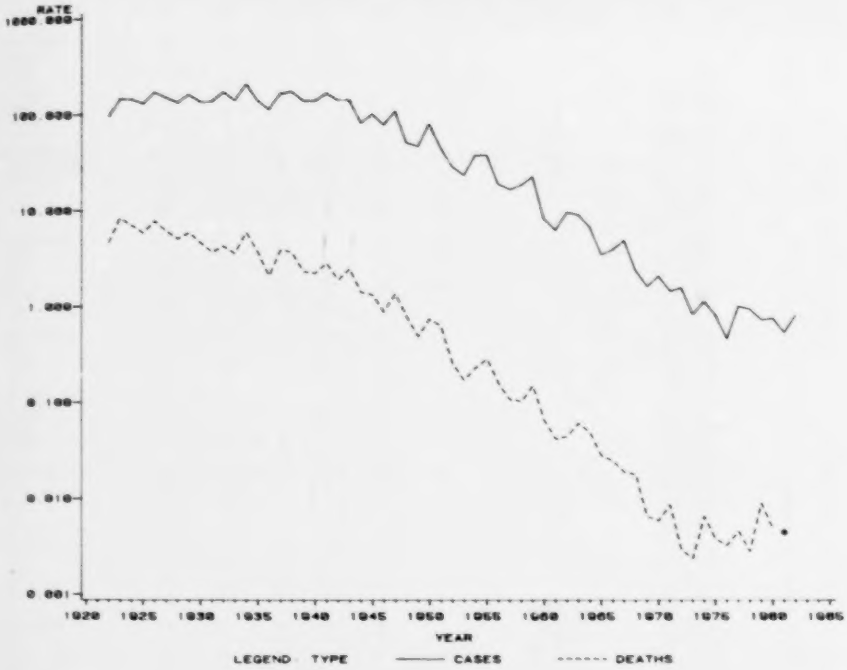
MUMPS

MUMPS — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**5,270**	**27**	**339**	**1,068**	**1,523**	**611**	**85**	**85**	**102**	**49**[1]	**15**[1]	**18**[1]	**1,357**
New England	**188**	**1**	**15**	**45**	**61**	**9**	**4**	**4**	**4**	**3**	**1**	**-**	**42**
Maine	42	1	2	8	7	3	1	1	-	-	-	-	19
N.H.	18	-	4	4	3	2	2	1	1	-	1	-	-
Vt.	7	-	1	3	1	-	-	1	-	-	-	-	1
Mass.	75	-	4	22	42	2	1	-	2	2	-	-	-
R.I.	18						NA						18
Conn.	29	-	4	8	8	2	-	1	1	1	-	-	4
Mid. Atlantic	**364**	**4**	**47**	**102**	**134**	**36**	**7**	**7**	**12**	**6**	**2**	**5**	**2**
N.Y. (excl. NYC)	100	2	16	23	30	11	5	2	5	2	1	3	-
N.Y.C.	47	1	16	11	8	2	1	2	1	3	-	2	-
N.J.	57	-	8	19	21	5	-	1	1	-	-	-	2
Pa.	160	1	7	49	75	18	1	2	5	1	1	-	-
E.N. Central	**2,680**	**8**	**84**	**567**	**868**	**271**	**14**	**15**	**27**	**8**[1]	**3**[1]	**3**[1]	**811**
Ohio	1,775	1	34	367	775	241	4	10	15	3	2	2	321
Ind.	48	-	12	17	11	2	1	1	-	4	-	-	-
Ill.	315	4	28	171	68	24	5	1	6	......	1	......	7
Mich.	410						NA						410
Wis.	132	3	10	12	14	4	4	3	6	1	1	1	73
W.N. Central	**646**	**2**	**12**	**55**	**245**	**197**	**10**	**9**	**11**	**5**	**-**	**3**	**97**
Minn.	455	1	8	20	224	173	5	4	9	4	-	2	5
Iowa	65	-	2	16	14	21	5	2	-	-	-	1	4
Mo.	13	-	1	5	5	2	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	1	-	-	1	-	-	-	-	-	-	-	-	-
Nebr.	1	-	-	-	-	-	-	1	-	-	-	-	-
Kans.	111	1	1	13	2	1	-	2	2	1	-	-	88
S. Atlantic	**286**	**1**	**33**	**39**	**26**	**20**	**8**	**7**	**7**	**7**	**-**	**2**	**136**
Del.	13	-	3	2	7	-	-	-	-	-	-	-	1
Md.	34	-	3	12	10	4	1	2	1	-	-	1	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	44	-	10	8	6	10	2	3	3	1	-	-	1
W. Va.	124						NA						124
N.C.	23	-	6	8	-	3	3	1	1	1	-	-	-
S.C.	18	1	5	4	-	-	1	-	1	-	-	-	6
Ga.	30	-	6	5	3	3	1	1	1	5	-	1	4
Fla.							NN						
E.S. Central	**68**	**1**	**16**	**20**	**7**	**2**	**2**	**1**	**3**	**1**	**-**	**-**	**15**
Ky.	22	-	2	4	4	-	-	-	-	-	-	-	12
Tenn.	25	-	7	12	1	1	1	1	2	-	-	-	-
Ala.	10	-	2	3	-	1	-	-	-	1	-	-	3
Miss.	11	1	5	1	2	-	1	-	1	-	-	-	-
W.S. Central	**270**	**7**	**36**	**76**	**64**	**28**	**9**	**18**	**13**	**6**	**5**	**-**	**8**
Ark.	9	-	2	2	3	1	-	-	-	-	1	-	-
La.	6	-	1	1	1	1	-	1	-	-	-	-	1
Okla.							NN						
Tex.	255	7	33	73	60	26	9	17	13	6	4	-	7
Mountain	**132**	**-**	**24**	**37**	**26**	**6**	**6**	**6**	**5**	**-**	**1**	**-**	**21**
Mont.	8	-	-	-	3	1	1	1	1	-	-	-	1
Idaho	5	-	2	3	-	-	-	-	-	-	-	-	-
Wyo.	2	-	-	2	-	-	-	-	-	-	-	-	-
Colo.	22	-	2	3	5	3	3	1	1	-	-	-	4
N. Mex.							NN						
Ariz.	63	-	16	25	15	1	2	3	1	-	-	-	-
Utah	24	-	2	2	2	-	-	-	1	-	1	-	16
Nev.	8	-	2	2	1	1	-	1	1	-	-	-	-
Pacific	**635**	**3**	**72**	**117**	**92**	**42**	**25**	**18**	**20**	**13**	**3**	**5**	**225**
Wash.	102						NA						102
Oreg.							NN						
Calif.	496	3	70	113	91	41	23	18	20	13	3	5	96
Alaska	16						NA						16
Hawaii	21	-	2	4	1	1	2	-	-	-	-	-	11
Guam	5	-	-	1	-	-	-	1	-	-	-	-	3
P.R.	103						NA						103
V.I.	4	-	4	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	3						NA						3
C.N.M.I.	1						NA						1

[1] Does not include cases reported by state of Illinois

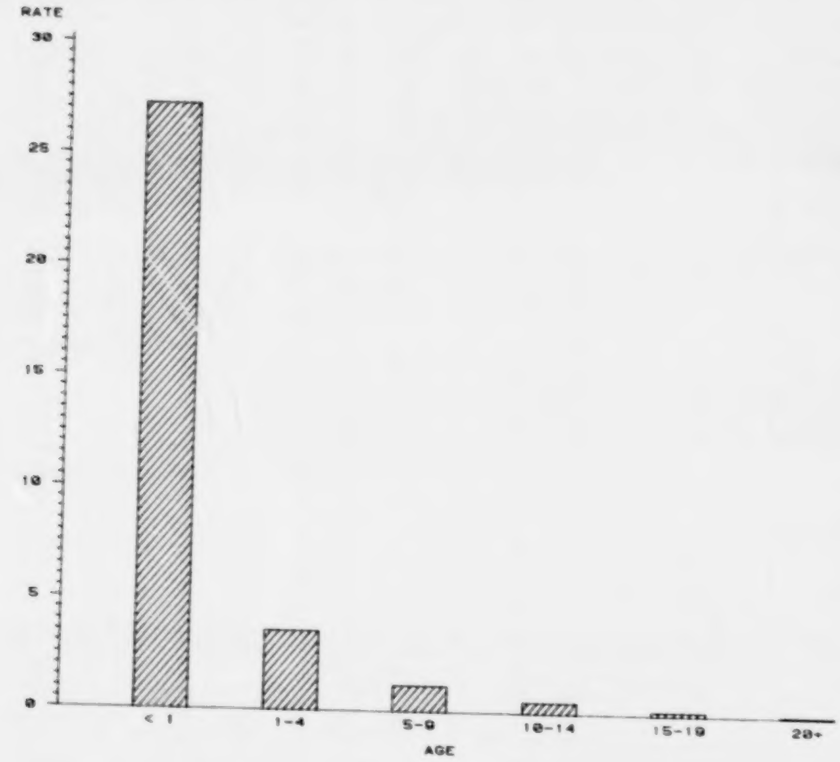
PERTUSSIS (whooping cough) — Reported cases and deaths per 100,000 population, by year, United States, 1922-1982



*Data not available for 1981 and 1982.

A total of 1,895 cases of pertussis were reported in the United States in 1982. Following a marked decline in reported cases and deaths per 100,000 population between 1950 and 1970, a period during which pertussis vaccine use became widespread, little further decline has occurred.

PERTUSSIS (whooping cough) — Reported cases per 100,000 population, by age group,* United States, 1982



*Rates were calculated by multiplying the percentage of cases with known age in a given age group by total reported cases and dividing by the population in that age group

In 1982, 78% of persons with pertussis whose ages were reported were children < 5 years old, and 52% were children < 1 year old. School immunization laws in 42 states have ensured that approximately 96% of persons who enter school have received at least three doses of diphtheria-tetanus-pertussis (DTP) vaccine. The percentage of preschool children ages ≥ 6 months who have received three or more doses of vaccine is unknown but is likely to be lower, particularly among the youngest children. To effect a further decrease in the incidence of pertussis, providers will need to adhere to recommended age-appropriate administration of DTP vaccine, which provides three doses of DTP by 6 months of age and a fourth dose at 18 months of age. High levels of age-appropriate vaccine coverage also provide indirect protection for children < 6 months of age who are too young to receive three DTP doses.

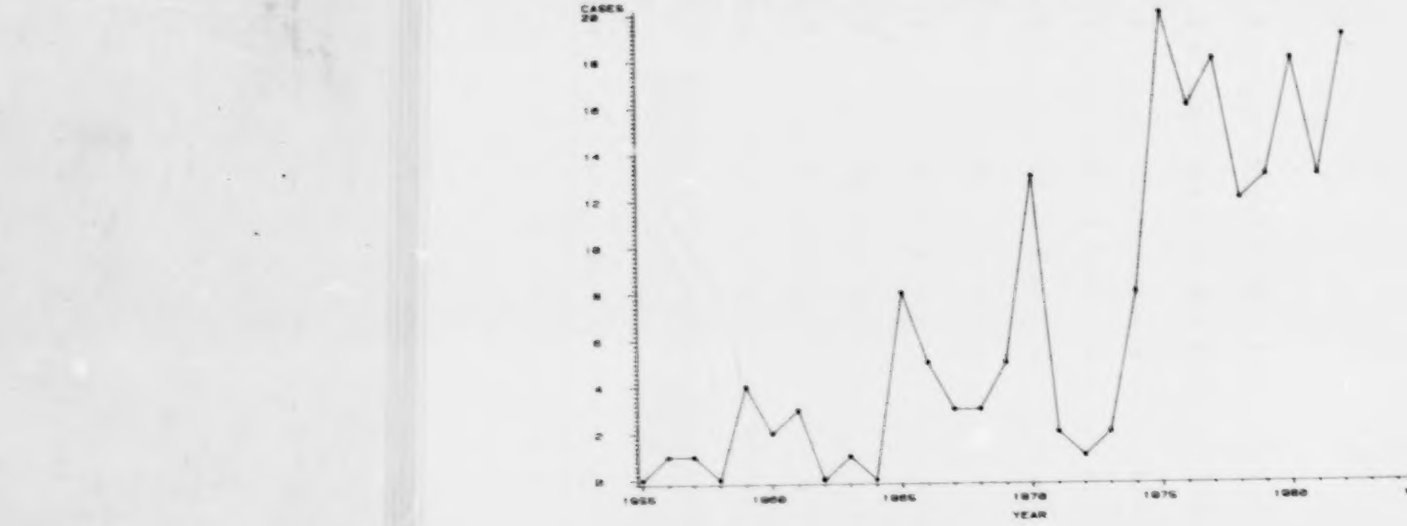
PERTUSSIS (Whooping cough) — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**1,895**	**960**	**474**	**181**	**88**	**35**	**24**	**22**	**29**	**9**[1]	**2**[1]	**2**[1]	**60**
New England	**66**	**44**	**7**	**4**	**8**	**3**	-	-	-	-	-	-	-
Maine	4	4	-	-	-	-	-	-	-	-	-	-	-
N.H.	12	1	1	3	7	-	-	-	-	-	-	-	-
Vt.	2	2	-	-	-	-	-	-	-	-	-	-	-
Mass.	32	25	3	1	1	2	-	-	-	-	-	-	-
R.I.	11	8	2	-	-	1	-	-	-	-	-	-	-
Conn.	5	4	1	-	-	-	-	-	-	-	-	-	-
Mid. Atlantic	**605**	**228**	**174**	**109**	**41**	**14**	**8**	**10**	**13**	**3**	**2**	**1**	**2**
N.Y. (excl. NYC)	322	94	108	71	28	8	4	2	4	1	2	-	-
N.Y.C.	53	40	11	-	-	1	-	-	-	-	-	-	1
N.J.	26	17	5	-	3	-	1	-	-	-	-	-	-
Pa.	204	77	50	38	10	5	3	8	9	2	-	1	1
E.N. Central	**370**	**194**	**77**	**26**	**15**	**8**	**9**	**9**	**9**	**2**[1]	**-**[1]	**-**[1]	**12**
Ohio	98	54	13	9	7	4	1	1	1	2	-	-	6
Ind.	35	16	12	2	1	-	-	-	-	-	-	-	4
Ill.	164	69	39	14	6	4	8	7	8	....	9	......	-
Mich.	32	23	8	1	-	-	-	-	-	-	-	-	-
Wis.	41	32	5	-	1	-	-	1	-	-	-	-	2
W.N. Central	**81**	**45**	**22**	**5**	**1**	**1**	**1**	-	**1**	**1**	-	-	**4**
Minn.	34	21	5	4	1	1	1	-	1	-	-	-	-
Iowa	9	9	-	-	-	-	-	-	-	-	-	-	-
Mo.	17	2	12	1	-	-	-	-	-	-	-	-	2
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	6	6	-	-	-	-	-	-	-	-	-	-	-
Nebr.	1	1	-	-	-	-	-	-	-	-	-	-	-
Kans.	14	6	5	-	-	-	-	-	-	1	-	-	2
S. Atlantic	**302**	**191**	**79**	**12**	**8**	**1**	**2**	**1**	**1**	**1**	-	-	**6**
Del.	9	7	1	-	-	-	-	-	-	-	-	-	1
Md.	80	62	14	1	2	-	1	-	-	-	-	-	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	29	18	6	4	1	-	-	-	-	-	-	-	-
W. Va.	15	7	5	1	-	-	-	-	-	-	-	-	2
N.C.	51	33	9	3	3	-	1	1	-	1	-	-	-
S.C.	16	11	4	-	-	-	-	-	1	-	-	-	-
Ga.	43	22	16	2	-	-	-	-	-	-	-	-	3
Fla.	59	31	24	1	2	1	-	-	-	-	-	-	-
E.S. Central	**54**	**31**	**15**	**5**	**2**	-	**1**	-	-	-	-	-	-
Ky.	7	5	1	-	1	-	-	-	-	-	-	-	-
Tenn.	26	13	9	2	1	-	1	-	-	-	-	-	-
Ala.	5	3	2	-	-	-	-	-	-	-	-	-	-
Miss.	16	10	3	3	-	-	-	-	-	-	-	-	-
W.S. Central	**119**	**74**	**28**	**2**	**6**	-	-	-	-	-	-	-	**9**
Ark.	7	6	1	-	-	-	-	-	-	-	-	-	-
La.	24	13	4	-	-	-	-	-	-	-	-	-	7
Okla.	9	2	6	-	1	-	-	-	-	-	-	-	-
Tex.	79	53	17	2	5	-	-	-	-	-	-	-	2
Mountain	**92**	**55**	**22**	**6**	**4**	**1**	-	**1**	**2**	**1**	-	-	-
Mont.	1	1	-	-	-	-	-	-	-	-	-	-	-
Idaho	12	7	4	1	-	-	-	-	-	-	-	-	-
Wyo.	4	3	1	-	-	-	-	-	-	-	-	-	-
Colo.	36	17	9	2	4	1	-	1	2	-	-	-	-
N. Mex.	8	7	1	-	-	-	-	-	-	-	-	-	-
Ariz.	27	18	5	3	-	-	-	-	-	1	-	-	-
Utah	4	2	2	-	-	-	-	-	-	-	-	-	-
Nev.	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	**206**	**98**	**50**	**12**	**3**	**7**	**3**	**1**	**3**	**1**	-	**1**	**27**
Wash.	36	19	12	2	-	1	-	-	2	-	-	-	-
Oreg.	27	9	13	1	-	-	-	-	-	-	-	-	4
Calif.	115	69	22	3	1	2	2	1	1	-	-	-	14
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	28	1	3	6	2	4	1	-	-	1	-	1	9
Guam	-	-	-	-	-	-	-	-	-	-	-	-	-
P.R.	22	13	8	-	-	-	-	-	-	-	-	-	1
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Does not include cases reported by state of Illinois.

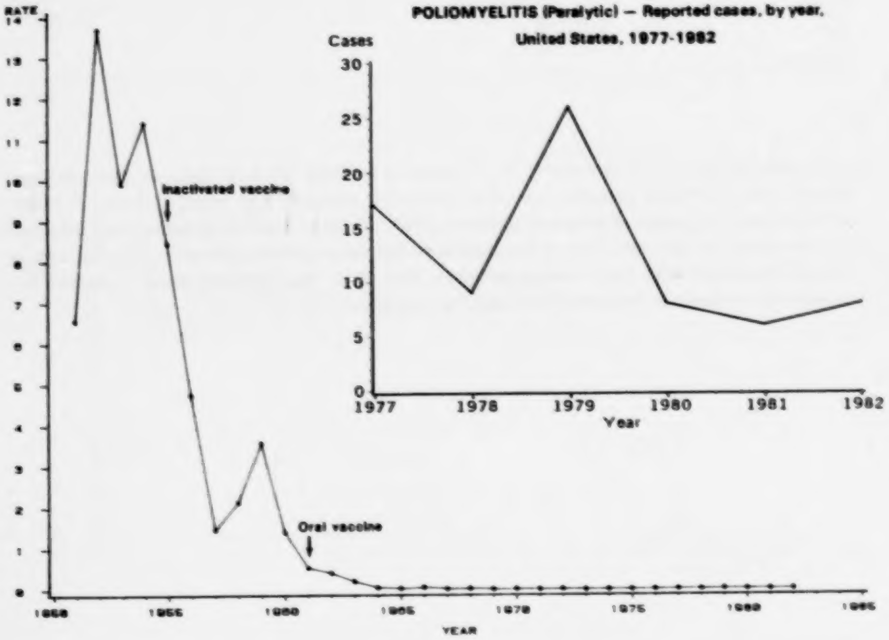
PLAGUE

PLAGUE — Reported cases in humans, by year, United States, 1955-1982



Nineteen cases of plague were reported in the United States in 1982, the largest number
single year since 1975 and the second largest since 1924. One or more cases occurre
each of seven western states. Texas reported its first indigenous plague case since 1920
the first from a wild-animal source, although wild rodent plague is reported frequentl
West Texas. Three (15.8%) of the 19 cases were fatal, about the same fatality rate as in e
of the previous 10 years. The patients ranged in age from 4 to 78 years; 9 patients wer
20 years of age. Nine (47.4%) of the 19 cases in 1982 occurred among American Indi
seven on the Navajo Reservation in northeastern Arizona and northwestern New Mexico,
in Santa Fe County, New Mexico, and one in Jefferson County, Oregon. The attack
among Navajos, based on a 1982 population total of 156,902 (Indian Health Service d
was 4.5/100,000. During the 2-year period 1981-1982, there were 13 cases am
Navajos, for an average annual attack rate of 4.1/100,000. These figures reflect the sc
and intensity of rodent plague on the Navajo Reservation during the past 2 years and gra
cally demonstrate the need for consistent plague surveillance and preventive co
programs.

POLIOMYELITIS (paralytic) — Reported cases per 100,000 population, by year, United States, 1951-1982



The incidence of paralytic poliomyelitis declined rapidly following the introduction and widespread use of inactivated poliovirus vaccine in 1955 and of oral poliovirus vaccines in 1961. Eight cases of paralytic poliomyelitis were reported in 1982.

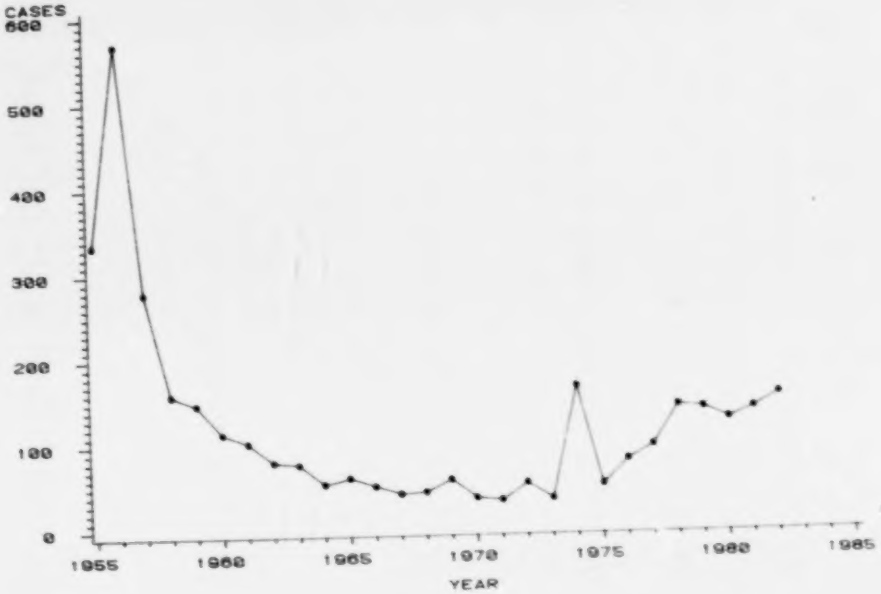
Of the 75 paralytic poliomeylitis cases reported to the poliomyelitis surveillance system with onset in the period 1977-1982, 56 (75%) were classified as endemic. Forty-seven of the endemic cases occurred in vaccinees or contacts of vaccine recipients; the remaining 9 occurred in persons for whom there was no reported temporal association with vaccine use. Ten (13%) were classified as epidemic-associated, five (7%) as imported, and four (5%) as immune deficient. All of the epidemic cases occurred in 1979.

POLIOMYELITIS (Paralytic) — Reported cases, by area and age group, United States, 1982

Area	Total	<1	1-4	20-24	40-49	50-59
United States	8	2	2	2	1	1
California	2	1	—	—	—	1
Idaho	1	—	—	—	1	—
Indiana	2	—	1	1	—	—
Iowa	1	—	—	—	—	1
N Y C	1	1	—	—	—	—
Washington	1	—	—	1	—	—

Eight cases of paralytic poliomyelitis were reported in 1982. No viral isolates were obtained from the two California patients, one of whom (a 56-year-old) had onset of illness in 1980, and the other had onset of illness in October 1981. Vaccine-like viral isolates were obtained from the other six patients. Two of these persons had received oral poliovirus vaccine; one of them (a 13-month-old) was immunodeficient. The other four patients were contacts (two household and two non-household) of vaccine recipients.

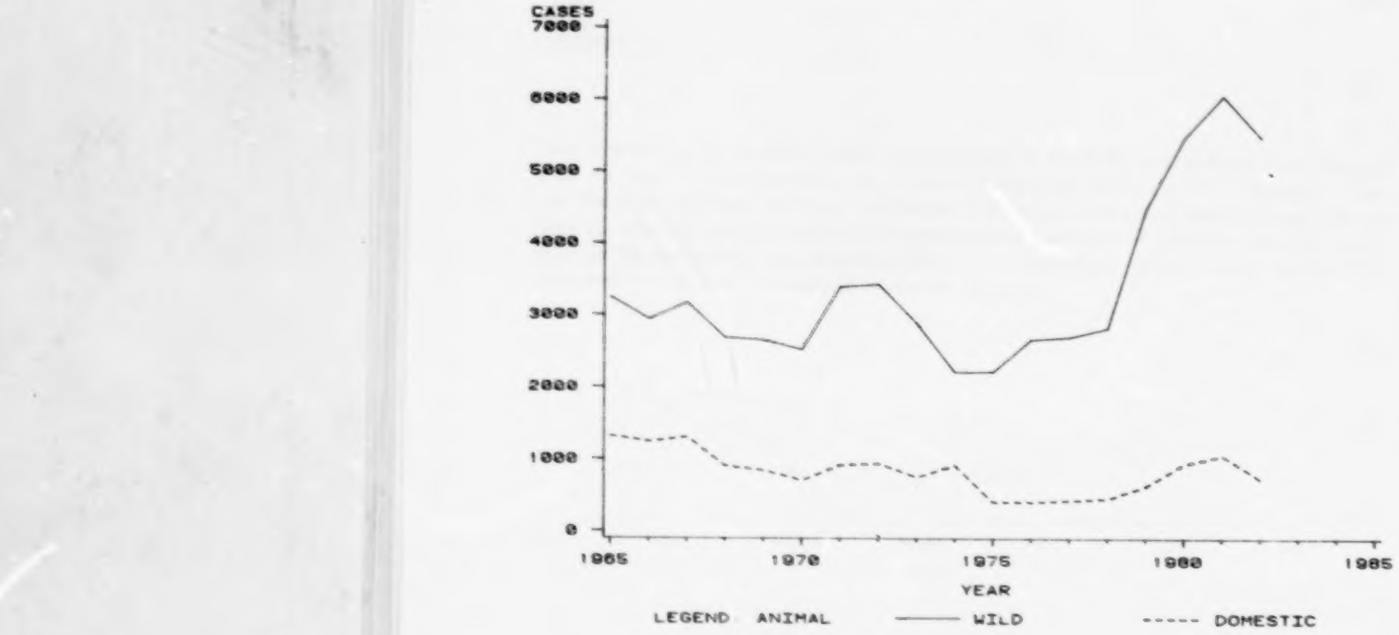
PSITTACOSIS — Reported cases, by year, United States, 1955-1982



The number of reported cases of psittacosis appears to have stabilized for the past 5 years at a level about double that for the 1960s (152 cases in 1982). Although most reported cases were associated with exposure to pet birds, outbreaks among employees of the turkey-processing industry accounted for many of the human cases reported in 1974, 1976, and 1981.

RABIES

RABIES — Reported cases in wild and domestic animals, by year, United States, 1965-1982



There were 6,278 reported cases of animal rabies in the United States and Puerto Rico in 1982, a decline of 13% compared with 1981. A major reduction was in reported skunk rabies; raccoon rabies showed a marked increase, reflecting a new raccoon rabies outbreak in the mid-Atlantic states. In the 2-year period 1981-1982, the number of cases of rabies in domesticated cats exceeded the number of cases in dogs for the first time. Vaccination of cats now requires more attention.

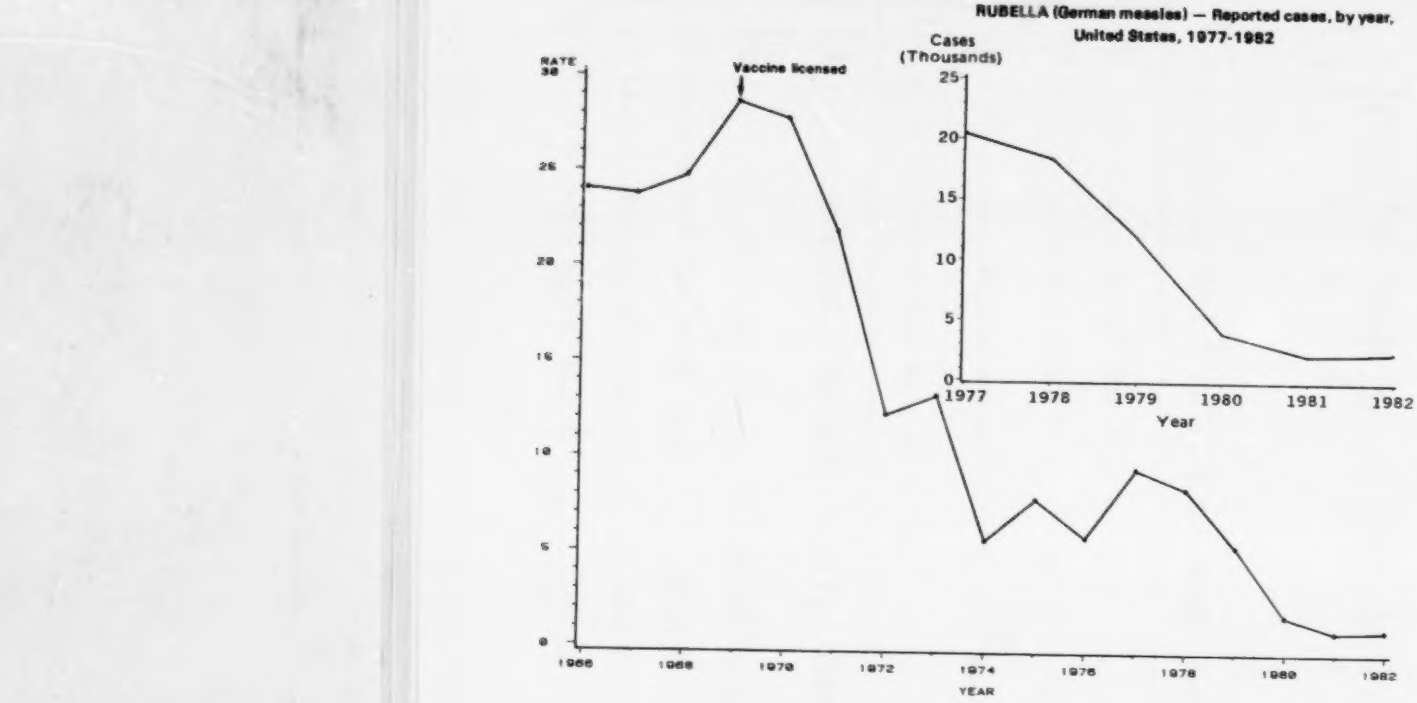
No human cases were reported in 1982; other years in which no human cases were reported were 1974 and 1980.

RABIES — Reported cases in animals, by area and species of animal, United States, 1982

Area	Total	Domestic				Wild				
		Cattle	Cats	Dogs	Other domestic	Skunks	Raccoons	Bats	Foxes	Other wild
United States	**6,212**	**296**	**207**	**145**	**80**	**3,088**	**1,156**	**977**	**220**	**43**
New England	**38**	—	—	—	**2**	—	—	**20**	**16**	—
Maine	21	—	—	—	2	—	—	3	16	—
N.H.	1	—	—	—	—	—	—	1	—	—
Vt.	2	—	—	—	—	—	—	2	—	—
Mass.	9	—	—	—	—	—	—	9	—	—
R.I.	—	—	—	—	—	—	—	—	—	—
Conn.	5	—	—	—	—	—	—	5	—	—
Mid. Atlantic	**204**	**13**	**1**	**7**	—	**37**	**27**	**82**	**35**	**2**
N.Y.	113	12	1	2	—	21	1	41	35	—
N.J.	16	—	—	—	—	—	—	16	—	—
Pa.	75	1	—	5	—	16	26	25	—	2
E.N. Central	**651**	**47**	**26**	**29**	**9**	**458**	**6**	**63**	**10**	**3**
Ohio	81	3	—	3	1	55	—	14	2	3
Ind.	76	1	1	2	2	60	—	10	—	—
Ill.	294	17	15	9	3	218	2	26	4	—
Mich.	7	4	—	—	—	1	—	2	—	—
Wis.	193	22	10	15	3	124	4	11	4	—
W.N. Central	**1,209**	**167**	**84**	**42**	**28**	**831**	**6**	**38**	**7**	**6**
Minn.	224	32	15	11	4	150	1	9	1	1
Iowa	377	77	38	10	11	227	2	7	2	3
Mo.	123	7	2	6	1	97	—	10	—	—
N. Dak.	97	16	7	3	2	64	—	2	3	—
S. Dak.	115	18	11	4	4	75	2	1	—	—
Nebr.	126	13	4	4	2	101	—	2	—	—
Kans.	147	4	7	4	4	117	1	7	1	2
S. Atlantic	**1,392**	**2**	**28**	**12**	—	**126**	**1,061**	**120**	**32**	**11**
Del.	2	—	—	—	—	—	—	2	—	—
Md.	153	1	—	—	—	14	118	17	2	1
D.C.	5	—	—	—	—	—	5	—	—	—
Va.	745	1	9	2	—	59	646	9	12	7
W. Va.	62	—	—	—	—	8	43	10	—	1
N.C.	66	—	—	—	—	26	—	38	2	—
S.C.	66	—	12	3	—	—	35	13	3	—
Ga.	213	—	6	5	—	17	163	13	7	2
Fla.	80	—	1	2	—	2	51	18	6	—
E.S. Central	**649**	**6**	**5**	**13**	**7**	**444**	**48**	**104**	**21**	**1**
Ky.	134	3	2	8	7	97	—	9	7	1
Tenn.	356	2	—	3	—	323	1	16	11	—
Ala.	146	1	3	2	—	24	47	66	3	—
Miss.	13	—	—	—	—	—	—	13	—	—
W.S. Central	**1,162**	**51**	**58**	**32**	**30**	**812**	**4**	**155**	**14**	**6**
Ark.	157	4	2	4	—	126	—	19	2	—
La.	32	—	2	—	—	20	—	10	—	—
Okla.	189	23	14	6	3	136	—	6	—	1
Tex.	784	24	40	22	27	530	4	120	12	5
Mountain	**288**	**6**	**1**	**2**	**2**	**86**	—	**184**	**4**	**3**
Mont.	97	5	—	1	—	56	—	32	1	2
Idaho	11	—	—	—	—	—	—	11	—	—
Wyo.	27	—	—	—	—	2	—	25	—	—
Colo.	47	—	—	—	—	—	—	47	—	—
N. Mex.	22	—	—	1	—	8	—	13	—	—
Ariz.	60	1	1	—	2	20	—	32	3	1
Utah	18	—	—	—	—	—	—	18	—	—
Nev.	6	—	—	—	—	—	—	6	—	—
Pacific	**619**	**4**	**4**	**8**	**2**	**294**	**4**	**211**	**81**	**11**
Wash.	8	—	—	—	—	—	—	8	—	—
Oreg.	5	—	—	—	—	—	—	5	—	—
Calif.	517	4	4	1	2	294	4	198	9	1
Alaska	89	—	—	7	—	—	—	—	72	10
Hawaii	—	—	—	—	—	—	—	—	—	—
Guam	—	—	—	—	—	—	—	—	—	—
P.R.	66	—	2	8	4	—	—	—	—	52
V.I.	—	—	—	—	—	—	—	—	—	—

RUBELLA

RUBELLA (German measles) — Reported cases per 100,000 population, by year, United States, 1966-1982



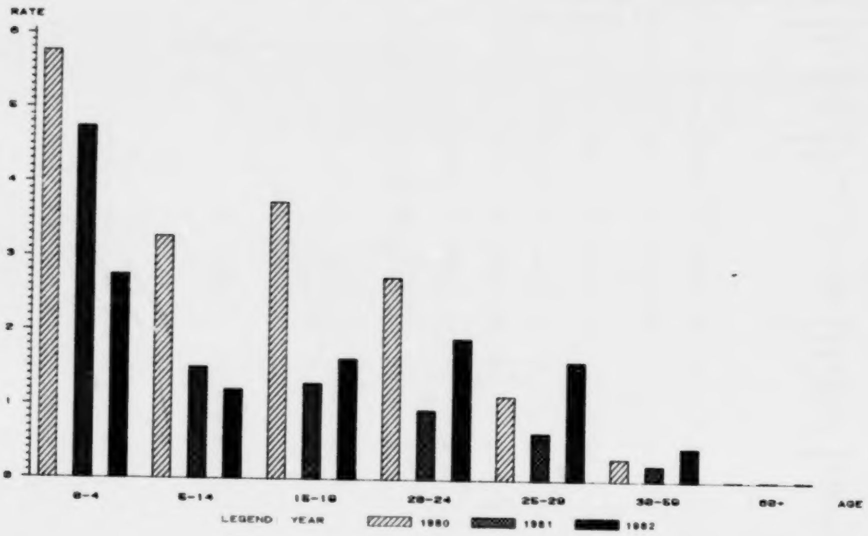
In 1982, 2,325 cases of rubella were reported. This represents a 12% increase over the 1981 total of 2,077 cases (which was the lowest reported incidence since rubella became a nationally notifiable disease in 1966), but a 96% decline from 1969, the year of rubella vaccine licensure. The increase in the 1982 incidence reflects markedly increased numbers of cases of rubella disease in California, which experienced almost three times as many cases in 1982 (1,437 cases) as in 1981 (533 cases) and accounted for 61.8% of all reported rubella cases in 1982.

Six areas reported no rubella cases in 1981, as did eight in 1982. The number of counties reporting rubella declined from 494 (15.7%) in 1981 to 366 (11.7%) in 1982. The outbreaks in California primarily involved postpubertal populations, particularly in hospitals and universities. California cases accounted for 74% of all cases occurring among persons ≥ 15 years of age in 1982 and were responsible for the increase in reported incidence in this age group, which had been steadily decreasing since 1979: 0.4 cases/100,000 population in 1981 compared with 0.8 cases/100,000 population in 1982.

RUBELLA (German measles) — Reported cases, by area and month, United States, 1982

Area	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
United States	**2,328**	**114**	**160**	**322**	**323**	**459**	**307**	**149**	**113**	**72**	**84**	**73**	**124**	**25**
New England	**22**	**6**	**3**	-	-	**2**	**1**	**2**	-	**2**	**1**	**3**	**3**	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.H.	13	5	3	-	-	-	-	-	-	2	-	1	2	-
Vt.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mass.	2	-	-	-	-	-	-	1	-	-	-	1	-	-
R.I.	1	-	-	-	-	1	-	-	-	-	-	-	-	-
Conn.	6	-	-	-	-	1	1	1	-	-	1	1	1	-
Mid. Atlantic	**111**	**3**	**12**	**28**	**17**	**15**	**8**	**7**	**8**	**6**	**3**	**4**	**5**	-
N.Y. (excl. NYC)	55	1	10	11	8	4	6	3	2	4	-	2	4	-
N.Y.C.	36	2	2	6	6	10	1	4	-	1	2	1	1	-
N.J.	13	-	-	9	3	1	1	-	3	-	1	-	-	-
Pa.	2	-	-	-	-	-	-	-	1	-	-	1	-	-
E.N. Central	**221**	**13**	**20**	**27**	**40**	**31**	**22**	**13**	**8**	**4**	**8**	**12**	**28**	-
Ohio	4	-	-	-	-	-	-	-	-	-	-	2	2	-
Ind.	31	2	2	5	6	5	7	-	1	-	2	-	1	-
Ill.	87	9	3	8	7	22	8	6	2	1	3	6	12	-
Mich.	57	1	7	10	20	1	3	3	2	1	-	1	8	-
Wis.	42	1	8	4	7	3	4	4	-	2	3	3	3	-
W.N. Central	**67**	**13**	**8**	**16**	**12**	**4**	**4**	**1**	**1**	**1**	**2**	**2**	**4**	-
Minn.	7	1	-	-	-	1	2	1	-	-	-	1	1	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mo.	38	9	6	11	10	2	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	1	-	-	1	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	21	3	2	3	2	1	2	-	1	1	2	1	3	-
S. Atlantic	**104**	**10**	**3**	**13**	**24**	**8**	**6**	**4**	**1**	**8**	**13**	**8**	**6**	**1**
Del.	1	-	-	-	1	-	-	-	-	-	-	-	-	-
Md.	36	3	1	11	17	2	-	-	1	-	-	-	1	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	12	5	-	-	3	-	3	1	-	-	-	-	-	-
W. Va.	3	-	1	-	-	-	-	-	-	-	1	1	-	-
N.C.	2	-	-	-	-	1	-	-	-	-	-	1	-	-
S.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ga.	18	1	-	-	-	3	1	1	-	6	3	2	1	-
Fla.	32	1	1	2	3	2	1	2	-	2	9	4	4	1
E.S. Central	**49**	**4**	**2**	**7**	**18**	**5**	**1**	**3**	**4**	**1**	**1**	**1**	**2**	-
Ky.	31	4	2	7	3	4	1	1	4	1	1	1	2	-
Tenn.	2	-	-	-	-	-	-	2	-	-	-	-	-	-
Ala.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miss.	16	-	-	-	15	1	-	-	-	-	-	-	-	-
W.S. Central	**128**	**10**	**9**	**14**	**10**	**18**	**15**	**8**	**6**	**9**	**12**	**6**	**9**	
Ark.	2	-	-	-	-	-	1	-	-	-	-	1	-	-
La.	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Okla.	3	-	1	-	1	-	1	-	-	-	-	-	-	-
Tex.	120	10	8	14	9	18	12	8	6	9	12	5	9	-
Mountain	**108**	**3**	**7**	**9**	**7**	**22**	**6**	**18**	**3**	**2**	**1**	**8**	**20**	-
Mont.	7	1	-	-	2	1	-	1	-	-	-	1	1	-
Idaho	7	-	-	-	-	1	2	3	-	-	-	1	-	-
Wyo.	8	1	2	1	1	-	-	2	-	-	-	-	1	-
Colo.	6	-	-	1	-	4	-	1	-	-	-	-	-	-
N. Mex.	6	-	1	1	-	3	-	1	-	-	-	-	-	-
Ariz.	29	-	1	3	1	2	-	5	2	-	-	2	13	-
Utah	31	1	2	2	3	4	4	4	-	1	1	4	5	-
Nev.	12	-	1	1	-	7	-	1	1	1	-	-	-	-
Pacific	**1,519**	**53**	**96**	**211**	**195**	**354**	**245**	**93**	**87**	**40**	**43**	**29**	**49**	**24**
Wash.	58	1	5	7	2	7	9	3	2	1	-	2	19	-
Oreg.	10	-	1	1	-	1	1	2	-	-	-	-	4	-
Calif.	1,437	51	90	199	191	346	234	88	81	38	42	27	26	24
Alaska	5	-	-	1	-	-	-	-	4	-	-	-	-	-
Hawaii	9	1	-	3	2	-	1	-	-	1	1	-	-	-
Guam	2	1	-	-	-	1	-	-	-	-	-	-	-	-
P.R.	13	1	2	-	2	-	2	1	1	-	1	1	2	-
V.I.	2	-	-	-	-	-	-	-	-	1	-	1	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-

RUBELLA (German measles) — Reported cases per 100,000 population, by age group*, United States, 1980-1982



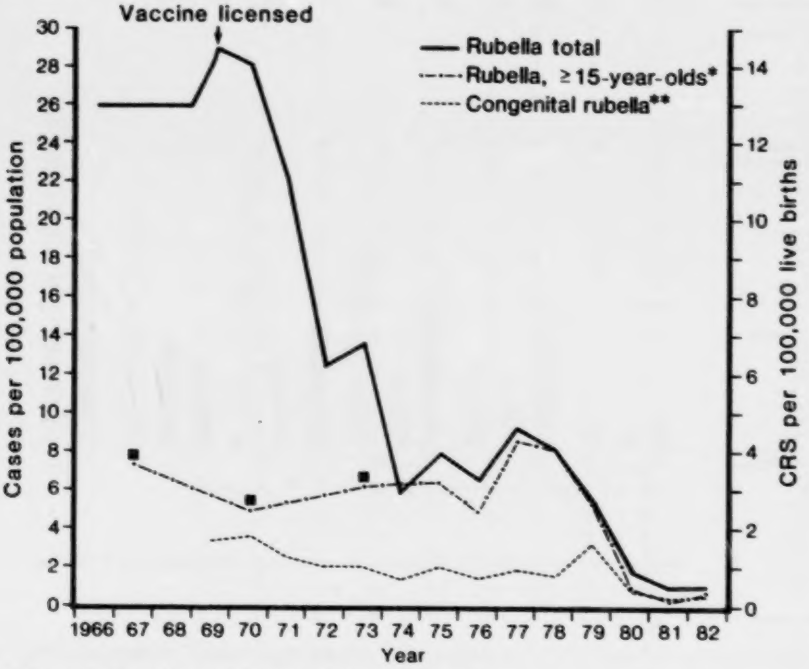
*Rates estimated by extrapolating age distribution of patients with age reported to the entire number of reported cases.

The 1982 age-specific incidence of rubella among children < 15 years of age continued to decrease. While children 0-4 years of age still had the highest overall incidence rate, they accounted for only half as many cases in 1982 (20%) as in 1981 (38%). In contrast, persons ≥ 15 years of age accounted for almost twice as many cases in 1982 as in 1981 (62% versus 36%). The greatest increase in incidence within this age group occurred in those 25-29 years of age. Further reductions in rubella incidence will require intensive efforts to identify and vaccinate susceptible persons of childbearing age, particularly postpubertal females.

RUBELLA (German measles) — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**2,325**	**177**	**249**	**214**	**155**	**288**	**375**	**298**	**213**	**85**	**25**	**4**	**242**
New England	**22**	**3**	**6**	**1**	-	**3**	**3**	**2**	**3**	**1**	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-
N.H.	13	3	6	1	-	-	3	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-	-	-	-	-
Mass.	2	-	-	-	-	1	-	-	1	-	-	-	-
R.I.	1	-	-	-	-	-	-	1	-	-	-	-	-
Conn.	6	-	-	-	-	2	-	1	2	1	-	-	-
Mid. Atlantic	**111**	**13**	**13**	**15**	**10**	**21**	**13**	**18**	**6**	**1**	**1**	-	-
N.Y. (excl. NYC)	55	9	9	9	6	14	3	2	1	1	1	-	-
N.Y.C.	36	3	3	6	2	4	4	10	4	-	-	-	-
N.J.	18	1	1	-	2	3	5	6	-	-	-	-	-
Pa.	2	-	-	-	-	-	1	-	1	-	-	-	-
E.N. Central	**221**	**26**	**48**	**50**	**30**	**22**	**22**	**8**	**7**	**2**	**1**	-	**5**
Ohio	4	-	-	-	-	1	1	-	2	-	-	-	-
Ind.	31	9	6	3	3	6	1	1	1	1	-	-	-
Ill.	87	10	19	32	11	5	2	2	2	-	-	-	4
Mich.	57	2	10	8	10	9	14	3	-	1	-	-	-
Wis.	42	5	13	7	6	1	4	2	2	-	1	-	1
W.N. Central	**67**	**8**	**1**	**4**	**2**	**6**	**11**	**18**	**8**	**1**	-	-	**8**
Minn.	7	-	-	1	-	2	1	2	1	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-	-
Mo.	38	2	1	-	1	2	10	15	7	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	1	1	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	21	5	-	3	1	2	-	1	-	1	-	-	8
S. Atlantic	**104**	**9**	**24**	**7**	**8**	**26**	**7**	**10**	**7**	**1**	**1**	-	**4**
Del.	1	-	-	-	-	1	-	-	-	-	-	-	-
Md.	36	-	-	-	5	19	2	6	3	-	1	-	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	12	2	4	3	-	2	1	-	-	-	-	-	-
W. Va.	3	1	1	-	-	1	-	-	-	-	-	-	-
N.C.	2	1	-	-	-	-	-	1	-	-	-	-	-
S.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ga.	18	4	5	1	2	-	-	1	1	-	-	-	4
Fla.	32	1	14	3	1	3	4	2	3	1	-	-	-
E.S. Central	**49**	**11**	**9**	**2**	**1**	**6**	**8**	**1**	**2**	-	-	-	**9**
Ky.	31	11	9	2	-	-	-	-	-	-	-	-	9
Tenn.	2	-	-	-	-	-	-	-	2	-	-	-	-
Ala.	-	-	-	-	-	-	-	-	-	-	-	-	-
Miss.	16	-	-	-	1	6	8	1	-	-	-	-	-
W.S. Central	**126**	**26**	**33**	**29**	**5**	**11**	**9**	**5**	**4**	-	-	-	**4**
Ark.	2	1	1	-	-	-	-	-	-	-	-	-	-
La.	1	-	-	-	1	-	-	-	-	-	-	-	-
Okla.	3	-	2	-	-	-	1	-	-	-	-	-	-
Tex.	120	25	30	29	4	11	8	5	4	-	-	-	4
Mountain	**106**	**7**	**27**	**9**	**13**	**11**	**9**	**9**	**10**	**2**	-	-	**9**
Mont.	7	1	1	1	-	-	-	-	1	-	-	-	3
Idaho	7	-	1	1	-	-	-	4	1	-	-	-	-
Wyo.	8	-	5	-	2	1	-	-	-	-	-	-	-
Colo.	6	-	1	-	2	-	-	1	2	-	-	-	-
N. Mex.	6	-	-	-	-	-	3	-	2	-	-	-	1
Ariz.	29	3	14	2	6	1	2	1	-	-	-	-	-
Utah	31	3	2	-	3	8	3	3	2	2	-	-	5
Nev.	12	-	3	5	-	1	1	-	2	-	-	-	-
Pacific	**1,519**	**74**	**88**	**97**	**86**	**182**	**293**	**227**	**166**	**77**	**22**	**4**	**203**
Wash.	58						NA						58
Oreg.	10	-	-	-	1	2	3	1	1	1	-	-	1
Calif.	1,437	74	86	97	85	180	287	222	163	75	21	4	143
Alaska	5	-	2	-	-	-	1	2	-	-	-	-	-
Hawaii	9	-	-	-	-	-	2	2	2	1	1	-	1
Guam	2	-	1	-	-	-	1	-	-	-	-	-	-
P.R.	13	2	2	1	1	1	1	1	1	-	-	-	3
V.I.	2	-	-	1	-	-	-	-	1	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

RUBELLA — Incidence rate of reported rubella and congenital rubella cases, United States, 1966-1982



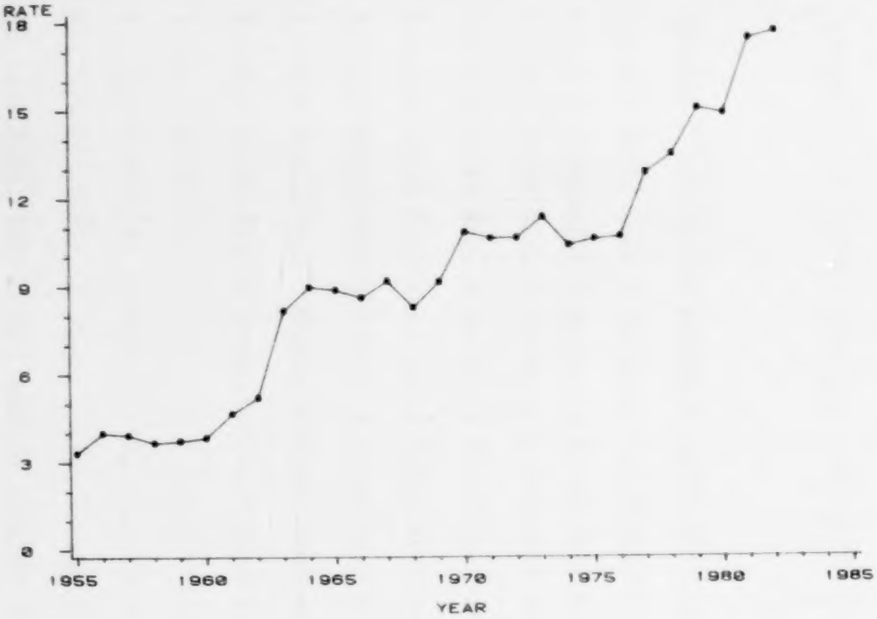
*Includes proration of ≥ 15-year-olds with unknown ages.

**Rate per 100,000 births of confirmed and compatible cases of congenital rubella syndrome (CRS), by year of birth. Reporting for recent years is provisional, as cases may not be diagnosed until later in childhood.

■ Average annual U.S. estimate of rubella incidence in ≥ 15-year-olds, based on data from Illinois, Massachusetts, and New York City for the 3-year periods, 1966-1968, 1969-1971, and 1972-1974. Age-specific data were not available for U.S. totals until 1975.

With the observed decrease in the reported incidence of rubella among older individuals since 1979, fewer cases of infants born with the congenital rubella syndrome (CRS) have been reported. Provisional data indicate that while 57 confirmed and compatible cases of CRS were reported to the National Congenital Rubella Syndrome Registry in 1979, only 14 cases were reported in 1980, 10 in 1981, and 11 in 1982.

SALMONELLOSIS (excluding typhoid fever) — Reported cases per 100,000 population, by year, United States, 1955-1982



The increase in the number of *Salmonella* isolates reported for 1982 continues the pattern of increase which began in 1977. The cause(s) of this increase is unknown. Forty percent (13,901/34,766) of all the reported salmonellosis cases with age given in 1982 affected children < 5 years old, but the rate increases noted since 1977 have occurred primarily among the older age groups.

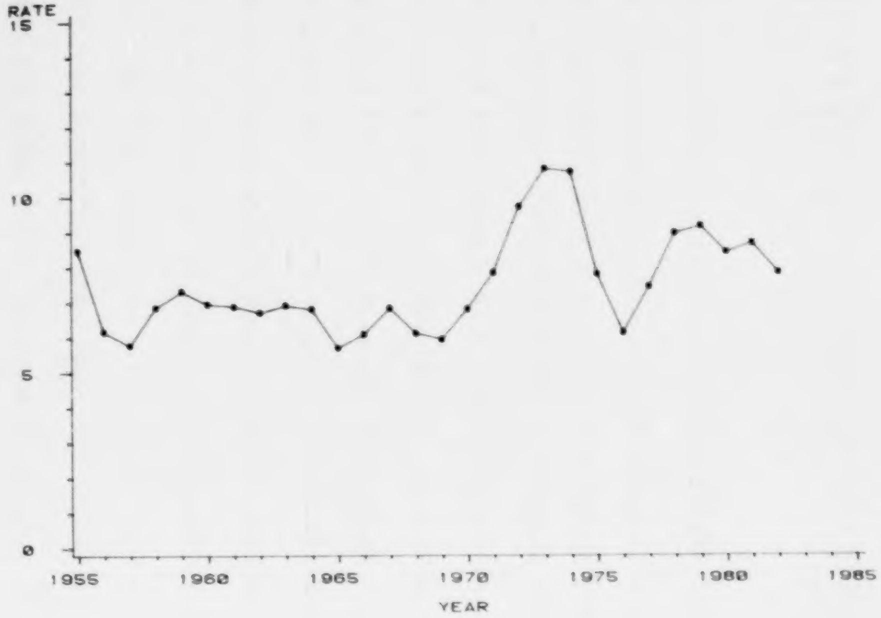
SALMONELLOSIS

SALMONELLOSIS (excluding typhoid fever) — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**40,936**	**7,272**	**6,629**	**2,455**	**1,767**	**1,936**	**2,613**	**2,207**	**2,793**	**1,607**[1]	**1,636**[1]	**3,684**[1]	**6,170**
New England	**4,048**	**375**	**488**	**239**	**231**	**330**	**404**	**308**	**389**	**195**	**184**	**427**	**478**
Maine	380	7	8	5	4	2	5	5	4	4	6	13	317
N.H.	225	22	22	18	15	12	30	19	21	16	10	40	-
Vt.	72	7	12	6	3	9	7	4	11	3	6	4	-
Mass.	2,257	190	290	150	128	222	267	195	246	122	112	237	98
R.I.	208	37	27	12	16	11	19	19	19	7	9	32	-
Conn.	906	112	129	48	65	74	76	66	88	43	41	101	63
Mid. Atlantic	**6,765**	**1,233**	**1,143**	**463**	**355**	**343**	**438**	**342**	**474**	**296**	**304**	**721**	**653**
N.Y. (excl. NYC)	1,315	152	217	83	90	95	141	73	121	79	63	142	59
N.Y.C.	1,753	367	297	89	50	42	63	89	97	54	54	112	439
N.J.	1,767	335	325	144	120	98	86	77	135	80	86	179	102
Pa.	1,930	379	304	147	95	108	148	103	121	83	101	288	53
E.N. Central	**6,014**	**1,004**	**743**	**331**	**260**	**294**	**400**	**287**	**408**	**118**[1]	**101**[1]	**253**[1]	**1,448**
Ohio	899	172	135	77	49	41	61	57	69	36	49	104	49
Ind.	591	102	102	26	34	44	43	32	42	23	17	47	79
Ill.	2,357	616	349	165	114	135	168	127	199		367		117
Mich.	1,186						NA						1,186
Wis.	981	114	157	63	63	74	128	71	98	59	35	102	17
W.N. Central	**2,772**	**306**	**393**	**167**	**124**	**148**	**217**	**196**	**160**	**110**	**105**	**294**	**552**
Minn.	825	95	119	38	45	52	72	78	62	46	40	101	77
Iowa	333	47	44	30	17	27	34	26	19	20	15	45	9
Mo.	571	36	115	34	25	28	32	27	23	17	24	58	152
N. Dak.	235	28	25	17	6	10	24	16	9	5	7	34	54
S. Dak.	103	17	14	9	2	10	9	7	5	4	3	7	16
Nebr.	154	20	16	6	11	5	8	11	13	5	6	11	42
Kans.	551	63	60	33	18	16	38	31	29	13	10	38	202
S. Atlantic	**9,112**	**2,091**	**2,008**	**611**	**357**	**344**	**405**	**429**	**526**	**374**	**331**	**844**	**792**
Del.	148	36	32	5	13	5	6	7	11	4	5	13	11
Md.	1,257	362	237	123	58	74	72	67	78	44	32	110	-
D.C.	177	19	56	20	5	8	16	20	19	13	-	-	1
Va.	1,468	332	267	93	74	70	73	71	105	63	63	113	144
W. Va.	178	26	27	18	10	4	6	5	11	4	5	17	45
N.C.	1,130	259	200	73	44	36	65	55	76	57	49	133	83
S.C.	672	126	87	32	16	12	23	32	23	33	19	54	215
Ga.	1,445	366	221	79	47	54	53	63	70	59	71	120	242
Fla.	2,637	565	881	168	90	81	91	109	133	97	87	284	51
E.S. Central	**1,649**	**313**	**286**	**89**	**61**	**54**	**62**	**66**	**99**	**75**	**75**	**189**	**280**
Ky.	329	57	33	24	13	15	22	13	25	23	18	35	51
Tenn.	455	100	89	30	20	17	18	25	38	25	27	66	-
Ala.	543	65	97	26	17	10	18	16	24	18	15	43	194
Miss.	322	91	67	9	11	12	4	12	12	9	15	45	35
W.S. Central	**3,749**	**927**	**725**	**163**	**117**	**74**	**164**	**133**	**205**	**127**	**147**	**312**	**655**
Ark.	532	147	90	19	15	10	17	21	23	23	19	52	96
La.	226	84	35	8	5	3	10	6	11	5	7	18	34
Okla.	485	67	106	27	9	9	18	12	26	15	6	53	137
Tex.	2,506	629	494	109	88	52	119	94	145	84	115	189	388
Mountain	**1,599**	**279**	**204**	**92**	**69**	**76**	**113**	**91**	**129**	**67**	**84**	**152**	**243**
Mont.	190	20	21	7	14	11	11	9	26	9	19	20	23
Idaho	114	10	13	7	3	4	11	8	8	4	4	15	27
Wyo.	32	8	4	3	3	-	1	2	-	1	-	1	9
Colo.	413	48	51	28	18	34	40	27	38	22	10	35	62
N. Mex.	259	41	40	19	3	3	10	14	14	6	9	18	82
Ariz.	404	126	56	17	18	15	23	19	32	20	24	39	15
Utah	94	14	13	8	6	4	10	2	8	3	6	13	7
Nev.	93	12	6	3	4	5	7	10	3	2	12	11	18
Pacific	**5,228**	**744**	**639**	**300**	**193**	**273**	**410**	**355**	**403**	**245**	**205**	**392**	**1,069**
Wash.	749	89	113	59	47	59	88	61	80	38	41	59	15
Oreg.	348	49	59	31	19	27	35	27	29	19	13	36	4
Calif.	3,552	598	456	206	126	180	279	258	289	185	146	296	533
Alaska	84	8	11	4	1	7	8	9	5	3	5	1	22
Hawaii	495						NA						495
Guam	166	68	24	2	5	6	7	8	8	1	3	4	30
P.R.	307						NA						307
V.I.	3						NA						3
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	10						NA						10

[1] Does not include cases reported by state of Illinois.

SHIGELLOSIS — Reported cases per 100,000 population, by year, United States, 1955-1982



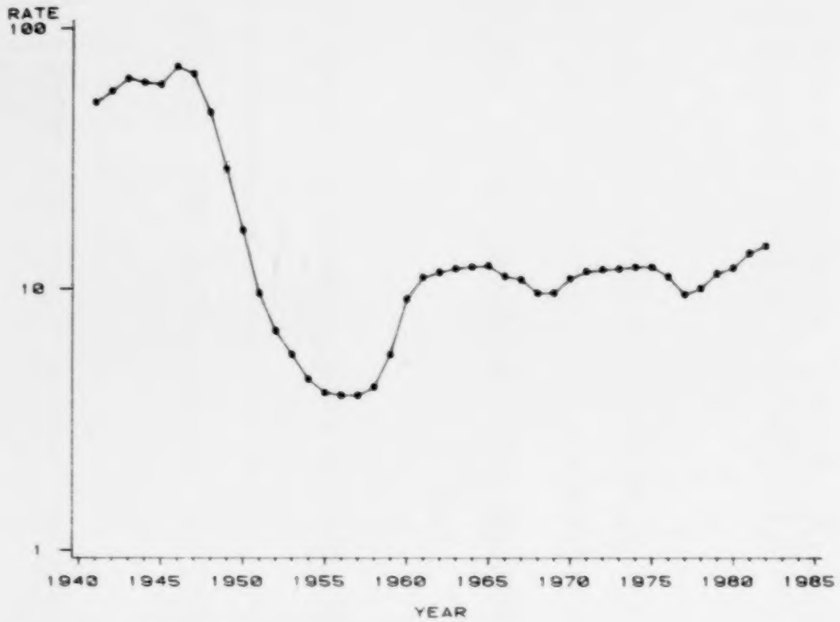
For 1982, 18,129 cases of shigellosis were reported in the United States. Approximately 70% of the *Shigella* isolates reported to CDC each year are *Shigella sonnei*, with *Shigella flexneri* accounting for a large percentage of the rest. Contrasting *Salmonella* and *Shigella* infections shows that *Salmonella* is most frequently isolated among children < 1 year of age, whereas *Shigella* is most commonly isolated from the 2-year-old age group. The two highest peaks in incidence of *Shigella* infections during the past decade are unexplained.

SHIGELLOSIS — Reported cases, by area and age group, United States, 1982

Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**18,129**	**785**	**5,286**	**2,516**	**928**	**670**	**1,198**	**1,283**	**1,409**	**525[1]**	**326[1]**	**550[1]**	**2,550**
New England	**1,352**	**38**	**348**	**248**	**129**	**51**	**98**	**122**	**128**	**41**	**18**	**32**	**99**
Maine	24	-	-	-	-	-	-	1	1	-	1	-	21
N.H.	13	-	2	2	-	1	3	1	2	2	-	-	-
Vt.	9	-	-	2	1	-	-	2	3	-	-	1	-
Mass.	296	9	63	32	17	13	32	43	45	15	8	10	9
R.I.	55	1	16	7	6	4	4	4	4	4	2	2	1
Conn.	955	28	267	205	105	33	59	71	73	20	7	19	68
Mid Atlantic	**2,314**	**97**	**650**	**310**	**149**	**85**	**151**	**165**	**212**	**78**	**65**	**103**	**249**
N.Y. (excl. NYC)	420	21	115	60	31	30	37	32	40	21	12	8	13
N.Y.C.	684	26	149	82	30	11	28	45	65	28	23	15	182
N.J.	599	26	170	91	48	24	45	41	56	16	17	29	36
Pa.	611	24	216	77	40	20	41	47	51	13	13	51	18
E.N. Central	**1,909**	**96**	**577**	**281**	**72**	**43**	**113**	**104**	**126**	**16[1]**	**7[1]**	**22[1]**	**349**
Ohio	195	6	76	34	15	5	17	7	8	4	2	10	11
Ind.	117	3	28	23	4	1	13	5	8	1	-	8	23
Ill.	1,250	81	427	200	48	31	65	72	99		103		124
Mich.	188						NA						188
Wis.	159	6	46	24	5	6	18	20	11	11	5	4	3
W.N. Central	**782**	**37**	**225**	**147**	**46**	**30**	**54**	**53**	**47**	**27**	**9**	**15**	**92**
Minn.	73	3	6	9	2	3	3	12	8	12	3	2	10
Iowa	69	7	15	13	8	4	5	7	6	4	-	-	-
Mo.	67	2	14	16	1	-	5	8	5	6	-	1	9
N. Dak.	31	3	6	1	-	2	1	-	1	-	-	4	13
S. Dak.	114	4	52	22	3	3	6	7	4	1	1	3	8
Nebr.	290	13	97	69	22	11	20	7	14	2	3	1	31
Kans.	138	5	35	17	10	7	14	12	9	2	2	4	21
S. Atlantic	**1,713**	**72**	**547**	**236**	**82**	**62**	**124**	**129**	**142**	**41**	**33**	**81**	**164**
Del.	9	-	1	-	-	1	3	-	2	-	1	-	1
Md.	144	12	36	17	5	5	11	13	25	5	4	11	-
D.C.	43	3	8	2	1	1	8	9	5	2	-	-	4
Va.	159	10	35	25	7	5	9	17	19	6	3	8	15
W. Va.	40	4	8	10	1	1	2	4	1	1	-	2	6
N.C.	269	9	100	66	20	10	21	15	10	5	5	5	3
S.C.	136	1	28	10	8	3	5	4	4	4	-	2	67
Ga.	328	14	95	37	14	12	29	29	27	6	7	6	52
Fla.	585	19	236	69	26	24	36	38	49	12	13	47	16
E.S. Central	**356**	**28**	**130**	**56**	**11**	**18**	**21**	**18**	**16**	**6**	**4**	**12**	**36**
Ky.	43	1	15	9	3	3	1	2	1	1	1	5	1
Tenn.	155	15	63	30	4	7	9	9	9	3	2	4	-
Ala.	84	8	20	10	2	5	5	5	4	-	-	-	25
Miss.	74	4	32	7	2	3	6	2	2	2	1	3	10
W.S. Central	**2,760**	**140**	**950**	**398**	**138**	**106**	**175**	**179**	**178**	**49**	**39**	**95**	**313**
Ark.	47	-	16	8	2	-	3	1	3	1	2	2	9
La.	114	5	32	14	2	10	9	9	6	3	2	7	15
Okla.	426	9	105	68	19	22	34	33	28	7	6	9	86
Tex.	2,173	126	797	308	115	74	129	136	141	38	29	77	203
Mountain	**1,859**	**94**	**641**	**257**	**86**	**69**	**114**	**117**	**114**	**57**	**36**	**64**	**210**
Mont.	50	1	16	11	3	1	2	1	4	-	1	1	9
Idaho	106	4	18	18	6	6	10	9	4	2	5	1	23
Wyo.	8	-	2	1	2	-	-	-	-	-	-	-	3
Colo.	416	10	95	57	12	14	31	49	49	29	13	12	45
N. Mex.	351	15	97	45	19	10	16	10	15	9	5	13	97
Ariz.	740	60	345	89	33	32	40	33	31	14	9	32	22
Utah	144	2	57	31	8	5	10	8	7	2	2	5	7
Nev.	44	2	11	5	3	1	5	7	4	1	1	-	4
Pacific	**5,084**	**183**	**1,218**	**583**	**215**	**206**	**348**	**396**	**446**	**210**	**115**	**126**	**1,038**
Wash.	284	11	59	23	11	18	24	32	64	19	12	9	2
Oreg.	269	9	62	42	15	10	31	41	33	9	5	7	5
Calif.	4,407	161	1,092	515	189	176	290	320	344	181	98	109	932
Alaska	29	2	5	3	-	2	3	3	5	1	-	1	4
Hawaii	95						NA						95
Guam	49	2	19	3	-	4	5	5	3	1	1	2	4
P.R.	100	17	42	23	2	3	3	-	1	1	1	5	2
V.I.	8	-	-	-	-	-	-	-	-	-	-	4	4
Pac. Trust Terr.	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	8						NA						8

[1] Does not include cases reported by state of Illinois.

SYPHILIS (primary and secondary) – Reported civilian cases per 100,000 population, by year, United States, 1941-1982*



*1941-1946 fiscal years (twelve-month period ending June 30 of the specified years)
1947-1982 calendar years

Syphilis is the third most frequently reported communicable disease in the United States, exceeded only by chickenpox and gonorrhea. Since the initiation of Federal assistance and efforts to control syphilis in the 1940s, reported cases of all stages of syphilis declined from an all-time high of 575,593 in 1943 to 75,579 in 1982.

Although the trend for reported infectious syphilis (the primary and secondary stages) has changed direction several times during the 42 years that these data have been available, the number of cases reported has increased each year since 1977. Reported primary and secondary syphilis cases totaled 33,613 in 1982, an increase of 7.5% over the 31,266 cases reported in 1981.

SYPHILIS — Reported cases in civilians per 100,000 population, by geographic division and area, United States, 1982 and 1981

Area	Primary/Secondary		All Stages	
	Rate		Rate	
	1982	1981	1982	1981
United States	**14.6**	**13.7**	**32.9**	**32.0**
New England	**4.8**	**4.9**	**13.8**	**13.6**
Maine	0.7	0.5	3.3	3.1
N.H.	0.2	1.5	0.3	2.6
Vt.	1.6	3.3	2.7	3.5
Mass.	7.0	6.7	17.0	16.9
R.I.	2.8	4.0	12.4	10.9
Conn.	4.6	4.7	18.1	17.2
Mid. Atlantic	**12.0**	**11.9**	**33.1**	**32.3**
N.Y.	17.3	17.3	48.5	45.2
N.J.	8.9	8.2	25.9	28.3
Pa.	6.1	6.2	14.6	15.8
E.N. Central	**4.8**	**5.5**	**14.5**	**18.3**
Ohio	3.1	3.0	8.5	10.0
Ind.	3.4	4.9	8.6	12.1
Ill.	9.2	10.7	30.0	39.0
Mich.	3.4	4.3	10.1	11.5
Wis.	2.2	1.9	5.9	7.5
W.N. Central	**3.4**	**3.9**	**11.1**	**13.6**
Minn.	3.7	4.0	7.6	7.5
Iowa	1.2	1.3	3.9	5.3
Mo.	6.1	8.0	21.9	29.0
N. Dak.	1.1	2.0	2.0	2.8
S. Dak.	0.9	0.4	2.6	2.5
Nebr.	1.0	0.7	3.2	3.3
Kans.	2.9	1.9	13.7	15.0
S. Atlantic	**23.6**	**22.0**	**51.7**	**50.6**
Del.	4.0	3.0	11.2	13.3
Md.	11.7	14.4	31.0	39.3
Va.	12.1	13.0	30.3	33.4
W. Va.	1.8	1.6	31.0	30.8
N.C.	12.3	11.1	29.6	29.6
S.C.	18.0	19.0	36.3	40.9
Ga.	32.4	35.0	68.0	74.1
Fla.	40.2	30.1	76.9	59.2
E.S. Central	**15.3**	**13.6**	**30.6**	**27.1**
Ky.	3.6	3.0	11.8	11.5
Tenn.	14.2	14.9	28.2	28.4
Ala.	21.3	15.7	38.2	27.1
Miss.	24.9	23.5	50.4	47.5
W.S. Central	**34.6**	**30.2**	**63.8**	**55.3**
Ark.	9.5	7.0	20.4	18.2
La.	42.9	38.7	84.6	77.4
Okla.	6.1	5.8	18.1	14.8
Texas	41.9	36.4	73.9	63.0
Mountain	**6.9**	**6.7**	**14.3**	**15.2**
Mont.	0.8	0.4	2.5	2.0
Idaho	2.7	2.1	4.8	4.6
Wyo.	3.0	4.1	6.8	8.2
Colo.	8.3	8.4	16.7	16.8
N. Mex.	15.3	10.1	28.2	26.1
Ariz.	7.3	7.0	16.1	18.9
Utah	1.6	2.0	3.9	6.8
Nev.	10.1	16.1	22.5	23.5
Pacific	**16.6**	**15.8**	**37.3**	**36.5**
Wash.	4.1	4.0	12.5	13.8
Oreg.	4.2	4.6	8.2	10.3
Calif.	20.6	19.5	45.9	43.2
Alaska	4.3	3.6	13.0	12.9
Hawaii	10.8	7.6	17.3	13.6
Guam	0.0	0.0	0.0	15.2
P.R.	24.0	22.5	54.1	57.9
V.I.	0.0	4.0	0.0	17.0

Note: Rates less than .05 are shown as 0.0. Rate for United States includes Washington, D.C.

SYPHILIS — Reported cases in civilians per 100,000 population, by geographic division and city[1], United States, 1982 and 1981

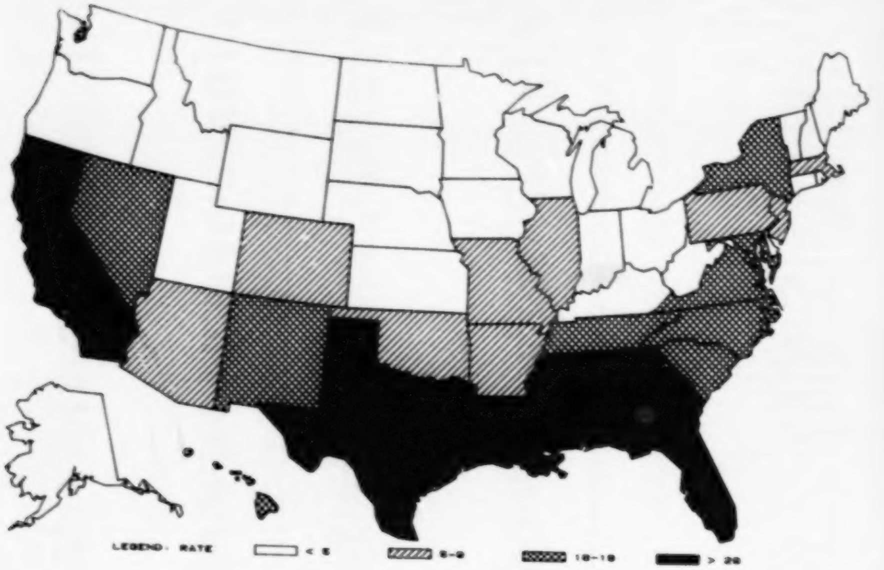
Area	Primary/Secondary		All Stages	
	Rate		Rate	
	1982	1981	1982	1981
United States Cities	**35.1**	**32.4**	**76.2**	**73.2**
New England	**36.3**	**40.8**	**98.9**	**96.9**
Boston, Mass	36.3	40.8	98.9	96.9
Mid. Atlantic	**31.7**	**31.0**	**84.9**	**81.4**
Buffalo, N.Y.	4.1	4.0	22.9	14.3
Jersey City, N.J.	26.2	17.7	83.5	67.9
Newark, N.J.	88.1	62.0	128.6	130.4
New York City, N.Y.	37.2	36.7	105.0	98.3
Philadelphia, Pa	34.6	34.8	77.6	86.2
Pittsburgh, Pa[2]	2.1	2.5	8.4	12.4
Rochester, N.Y.	41.2	36.1	82.8	62.6
Yonkers, N.Y.	13.9	7.2	32.0	18.0
E.N. Central	**17.8**	**20.4**	**54.2**	**68.5**
Akron, Ohio	3.9	4.3	9.6	18.0
Chicago, Ill	26.4	31.0	86.1	113.0
Cincinnati, Ohio	9.4	15.0	24.6	30.2
Cleveland, Ohio	22.7	17.3	59.2	62.8
Columbus, Ohio	10.9	10.2	27.4	37.4
Dayton, Ohio	5.6	4.5	34.5	35.3
Detroit, Mich	15.6	19.8	48.4	54.6
Indianapolis, Ind[2]	14.1	18.0	32.7	43.4
Milwaukee, Wis	9.5	9.7	27.3	32.6
Toledo, Ohio	4.3	3.7	14.9	11.9
W.N. Central	**11.4**	**14.8**	**35.8**	**43.2**
Des Moines, Iowa	2.9	2.6	8.5	11.5
Kansas City, Mo	29.6	43.0	86.6	104.8
Minneapolis, Minn[2]	11.0	13.6	21.8	22.1
Omaha, Nebr[2]	1.0	1.3	5.8	7.5
St Louis, Mo	20.4	28.7	83.8	112.6
St Paul, Minn	6.4	2.3	15.9	11.2
Wichita, Kans[2]	2.2	1.4	25.1	26.9
S. Atlantic	**64.2**	**53.2**	**122.6**	**111.8**
Atlanta, Ga[2]	132.4	129.0	240.7	259.9
Baltimore, Md	30.8	38.5	75.7	86.3
Charlotte, N.C.	52.2	33.7	81.2	56.3
Jacksonville, Fla	43.4	15.8	79.2	33.6
Miami, Fla[2]	70.7	39.4	121.6	79.2
Norfolk, Va	56.0	68.3	96.5	115.9
Richmond, Va	48.4	43.3	122.5	125.8
St Petersburg, Fla[2]	29.1	22.9	61.8	54.9
Tampa, Fla[2]	88.0	63.1	134.2	98.5
Washington, D.C.	74.0	103.2	204.8	265.0
E.S. Central	**29.4**	**26.7**	**53.8**	**49.9**
Birmingham, Ala[2]	40.7	22.9	63.8	36.0
Louisville, Ky[2]	8.4	5.1	24.8	24.0
Memphis, Tenn[2]	48.4	55.6	89.2	95.1
Nashville, Tenn[2]	12.4	15.4	23.4	32.5
W.S. Central	**66.6**	**57.5**	**117.4**	**98.4**
Austin, Tex[2]	44.2	32.3	85.7	74.2
Corpus Christi, Tex[2]	35.5	28.4	72.2	45.0
Dallas, Tex[2]	89.6	84.9	145.5	135.9
El Paso, Tex[2]	27.5	19.6	59.2	47.0
Fort Worth, Tex[2]	37.1	30.6	67.0	50.6
Houston, Tex[2]	95.8	80.7	159.7	129.8
New Orleans, La	134.3	123.2	254.2	220.3
Oklahoma City, Okla	19.6	23.2	44.9	46.8
San Antonio, Tex[2]	30.7	20.5	66.2	45.9
Tulsa, Okla	7.5	5.5	22.6	15.6
Mountain	**14.5**	**13.3**	**27.9**	**28.1**
Albuquerque, N.M[2]	27.3	20.3	46.6	41.8
Denver, Colo	34.5	34.0	67.8	67.8
Phoenix, Ariz[2]	7.9	7.4	16.3	18.1
Tucson, Ariz[2]	6.2	6.0	12.3	15.8
Pacific	**26.1**	**25.0**	**59.3**	**57.1**
Honolulu, Hawaii	21.6	15.0	32.4	23.4
Los Angeles, Calif[2]	25.1	24.9	67.7	66.2
Oakland, Calif[3]	19.5	16.4	34.9	30.3
Portland, Oreg[2]	9.9	11.9	19.6	25.9
Sacramento, Calif[2]	14.8	7.3	21.8	11.7
San Diego, Calif[2]	11.9	9.8	25.3	20.5
San Francisco, Calif	180.5	178.7	320.4	327.5
San Jose, Calif[2]	13.4	10.5	33.2	22.8
Seattle, Wash[2]	7.3	8.4	20.8	22.7
San Juan, P.R[2]	63.2	57.9	153.3	160.0

[1] Restricted to cities with population of 200,000 or more in 1970.

[2] County data or equivalent.

[3] Oakland is Alameda County less Berkeley.

SYPHILIS (primary and secondary) — Reported cases in civilians per 100,000 population, by state, United States, 1982



Twenty-eight states reported higher rates of primary and secondary syphilis in 1982 than in 1981. Differences among states reporting primary and secondary syphilis reflect not only actual differences in incidence but also differences in many variables such as case-finding activities, availability of public clinic facilities, and program priorities.

Primary and secondary syphilis cases were reported more frequently from large urban areas than from less populated areas. Sixty-three cities with populations of 200,000 or more, comprising only 25.8% of the United States population, accounted for 61.8% of reported cases in 1982.

SYPHILIS (Primary and secondary) — Reported cases in civilians and cases per 100,000 population, by age and sex, United States, 1982 and 1981

Age group	Male				Female				Total			
	1982		1981		1982		1981		1982		1981	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
0-14	65	0.2	61	0.2	173	0.7	157	0.6	238	0.5	218	0.4
15-19	2,424	24.5	2,273	22.4	2,093	21.6	1,900	19.0	4,517	23.1	4,173	20.7
20-24	6,745	65.4	6,326	61.2	2,716	25.3	2,466	22.9	9,461	44.9	8,792	41.7
25-29	6,181	61.8	5,797	59.6	1,632	15.8	1,482	14.8	7,813	38.4	7,279	36.8
30-39	6,361	38.4	5,966	37.2	1,414	8.2	1,284	7.7	7,775	22.9	7,250	22.1
40-49	2,307	20.3	2,164	19.4	427	3.6	388	3.3	2,734	11.7	2,552	11.1
50+	905	3.4	849	3.2	170	0.5	153	0.5	1,075	1.8	1,002	1.7
Total	24,988	22.5	23,436	21.3	8,625	7.3	7,830	6.6	33,613	14.6	31,266	13.7

From 1978 to 1982, rates increased 44.9% for men and 50.0% for women. Similarly, the increase from 1981 to 1982 was greater for women (10.6%) than for men (5.6%).

These increases are believed due to: 1) an actual increase in incidence of disease even though reported cases are influenced by changes in diagnostic procedures, reporting practices, and a shift of the population at risk from the private practice sector to public clinics, where reporting is more complete; 2) a shift in resources from syphilis to gonorrhea by state and local venereal disease prevention programs; and 3) an increase in the proportion of men with early infectious syphilis who name other men as sexual partners (an increase from 23% in 1969 to an estimated 44% in 1982). Traditionally, the sex partner referral process for homosexual men has been less effective than for heterosexual men.

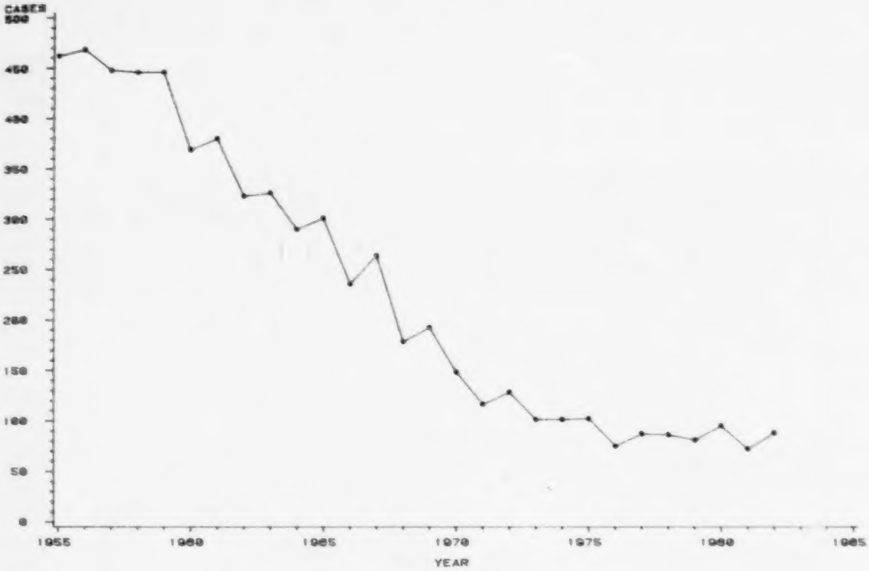
SYPHILIS (Congenital) — Reported cases, by age group, United States, 1982 and 1981

Age group	Number of cases		Percentage of total	
	1982	1981	1982	1981
<1	159	160	61.4	55.7
1-4	11	22	4.3	7.7
5-9	6	8	2.3	2.8
10+	71	92	27.4	32.1
Unknown	12	5	4.6	1.7
Total	259	287	100.0	100.0

Since initiation in the 1940s of efforts to control syphilis, reported cases of congenital syphilis in all ages dropped from 17,600 in 1941 to 259 in 1982, a decline of 98%, and infant deaths due to syphilis have declined 99%. Even so, increases in congenital syphilis have occurred among infants < 1 year of age during the last few years, mirroring the increasing trend of reported cases of primary and secondary syphilis among women.

Congenital syphilis in infants < 1 year of age fell progressively from 422 reported cases in 1971 to a low of 104 in 1978, then increased to 160 in 1981, an increase of 53.8%; in 1982, 159 cases were reported. Factors contributing to the increase in reported cases of congenital syphilis among infants (< 1 year of age) include the rising incidence of early syphilis among women in the United States, and breakdowns in the prenatal care system (e.g., lack of medical care and serologic tests during the prenatal period).

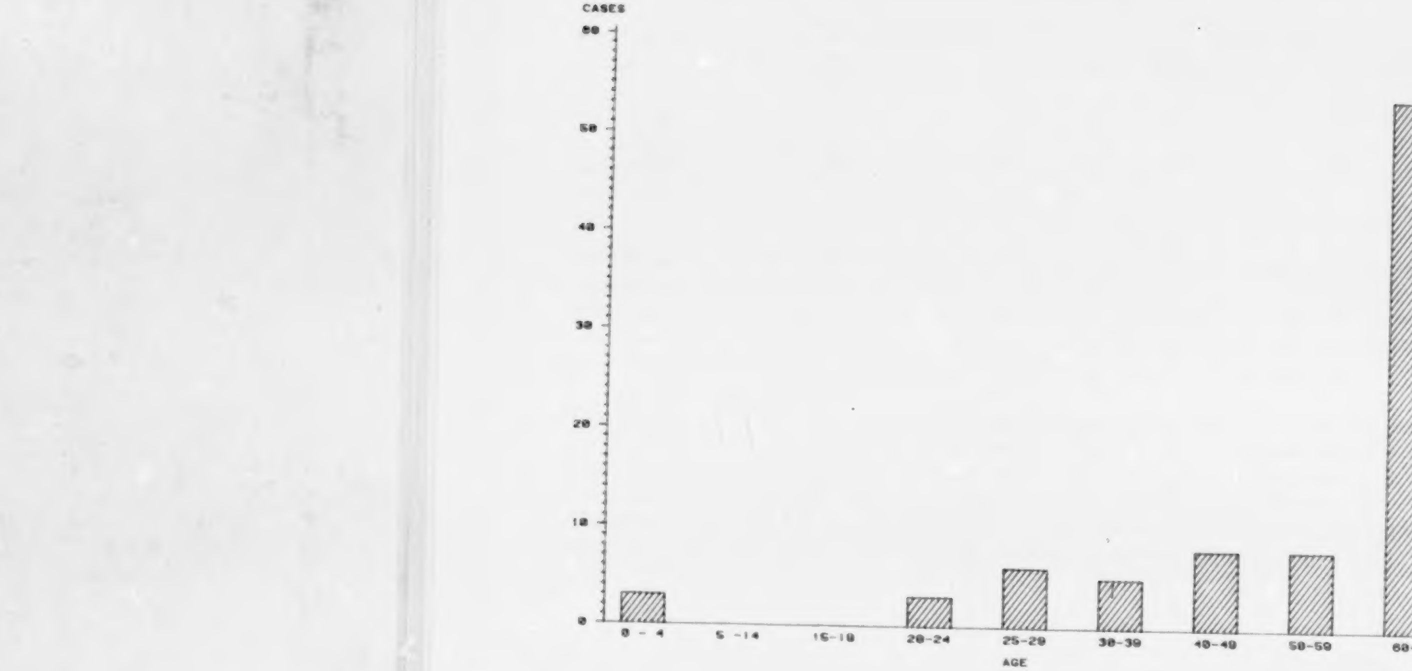
TETANUS — Reported cases, by year, United States, 1955-1982



After substantial declines in occurrence following widespread vaccination of children, the annual number of reported tetanus cases has been stable since 1976 (88 cases in 1982). The lack of further decline probably reflects continued inadequate vaccination coverage of the older portion of the population.

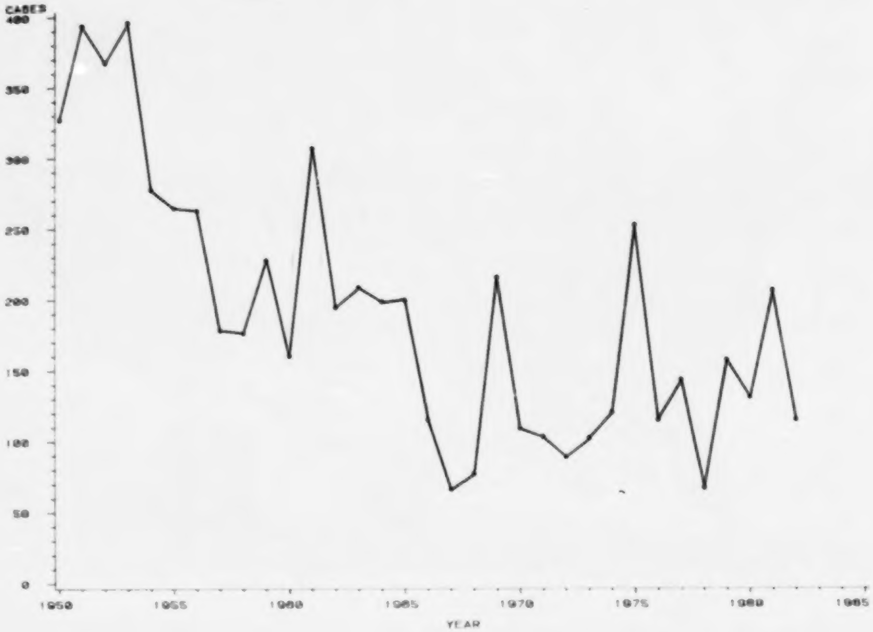
TETANUS

TETANUS — Reported cases, by age group, United States, 1982



The largest number of cases occurred among persons ≥ 60 years of age. This is consistent with serosurveys that show that 49%-66% of persons ≥ 60 years of age may not b protected against tetanus. Health-care providers who treat the elderly should take ever opportunity to ensure that their patients are protected against tetanus and diphtheria i accordance with Immunization Practices Advisory Committee (ACIP) recommendations.

TRICHINOSIS — Reported cases, by year, United States, 1950-1982

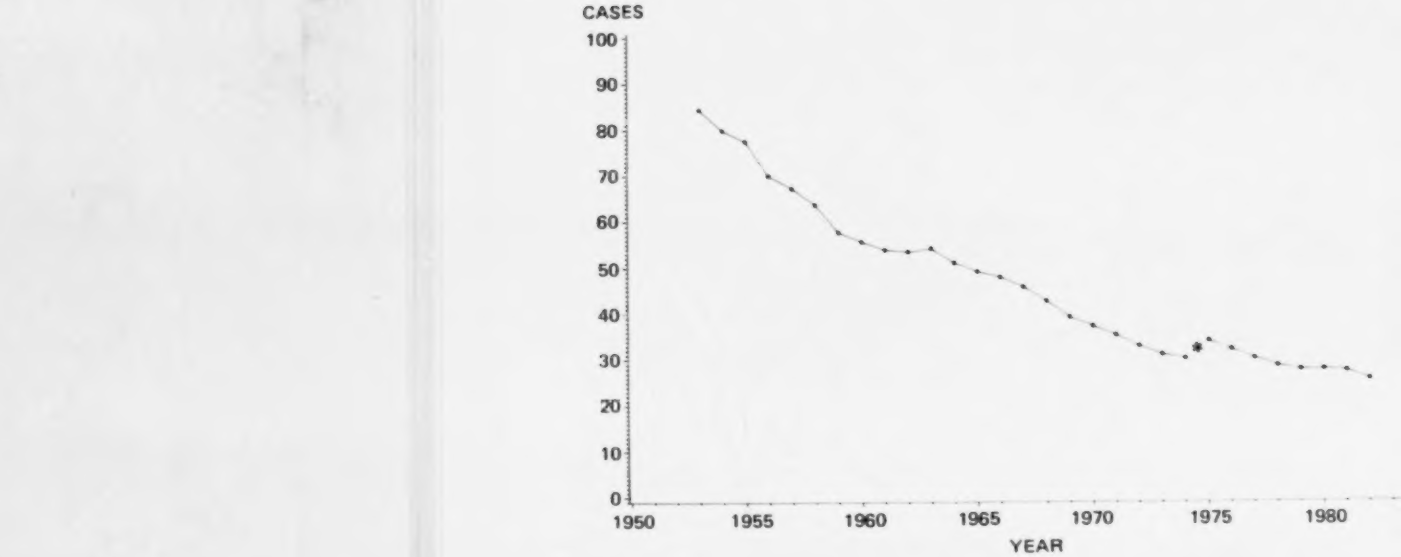


A total of 115 cases of trichinosis were reported to CDC for 1982. The largest number of cases was reported from the following states: New Jersey, 23 (20%); Pennsylvania, 10 (8.7%); New York, nine (7.8%); Maryland, seven (6.1%); and Illinois, six (5.2%).

On the basis of the data reported to the surveillance program, 11 common-source outbreaks, involving at least two cases each, accounted for 38% of the cases. About two-thirds of the cases were acquired from pork products purchased from commercial sources. Ingesting the meat of wild animals was cited as the cause for 12 of the reported cases.

TUBERCULOSIS

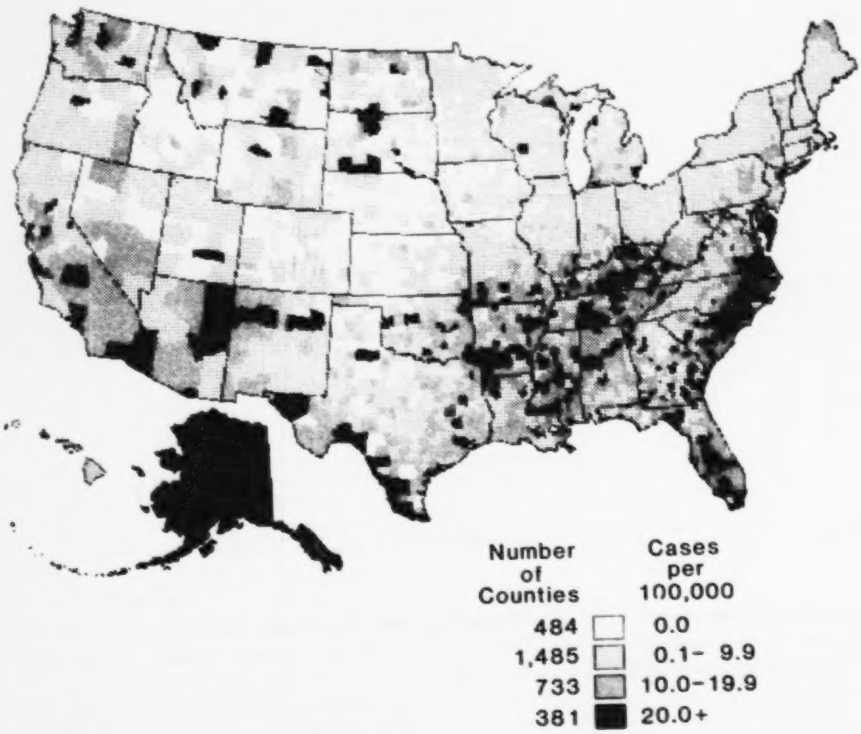
TUBERCULOSIS — Reported cases (in thousands), by year, United States, 1953-19



*Case data subsequent to 1974 are not comparable to prior years due to changes in reporting criteria which became effective in 197

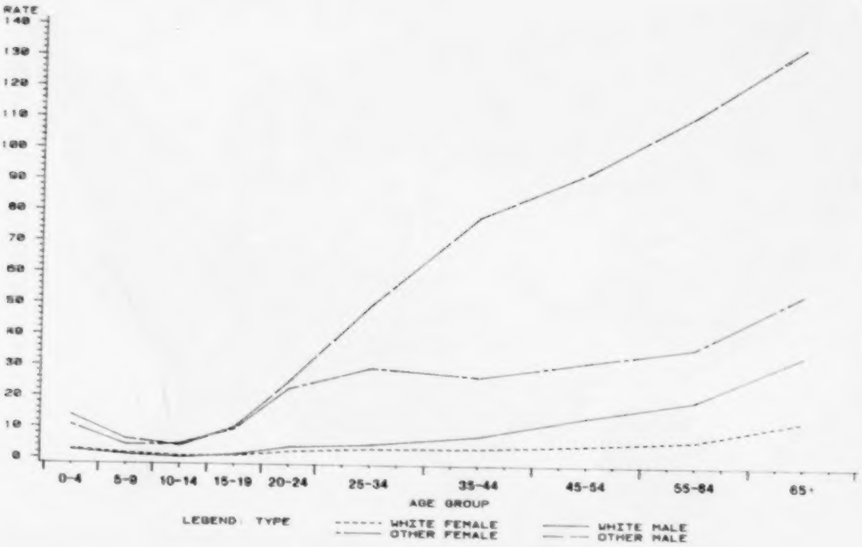
For 1982, 25,520 cases of tuberculosis (TB) were reported to CDC, for a case ra
11.0/100,000 population. This is a decrease from 1981 of 6.8% in the number of c
reported and a decrease of 7.6% in the case rate. In the period 1968-1978, the ave
annual decrease in TB cases in the United States was 5.6%. However, in the p
1979-1981, when there was a large influx of Southeast Asian refugees, the ave
annual decline was only 1.4%. The 6.8% decrease in the number of cases in 1982 m
dicate that the previous downward trend has resumed. This may be explained in pa
the smaller number of refugee arrivals in 1982. Another factor that may have influe
the reported morbidity figures for 1982 is the implementation of a new individual
reporting system that requires more accurate verification of cases before the
counted. In January 1982, 20 additional areas began using the new system, wh
being phased in over several years.

TUBERCULOSIS — Reported average cases per 100,000 population, by county, United States, 1979-1981


Number of Counties
Cases per 100,000
484 ☐ 0.0
1,485 ☐ 0.1- 9.9
733 ▨ 10.0-19.9
381 ■ 20.0+

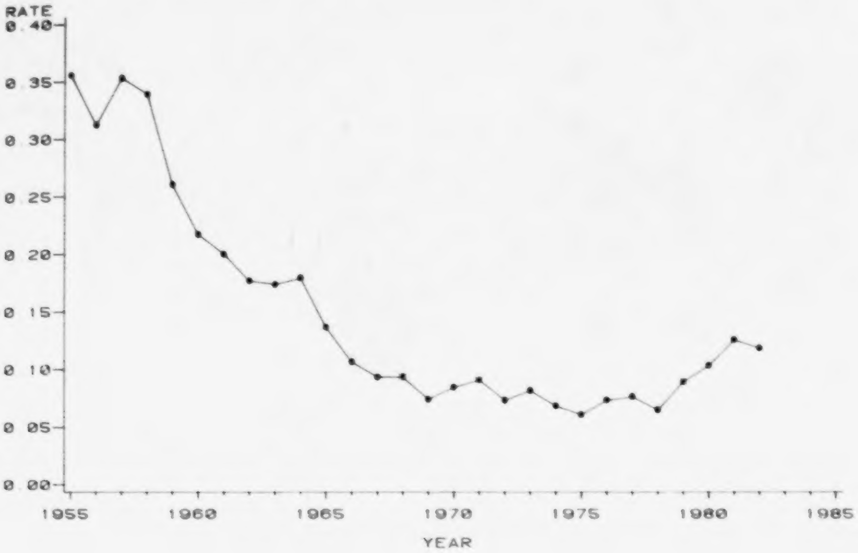
The Southeastern United States and the states on the United States-Mexico border reported the highest average tuberculosis case rates for the period 1979-1981. In general, rates were higher east of the Mississippi River.

TUBERCULOSIS — Reported cases per 100,000 population, by age, race, and sex, United States, 1982



The case rate was lowest for the 10-14 year age group for all race-sex categories except for "females of other races (5-9 years)." The case rate increased with age to peak in the 65+ age group for all race-sex categories.

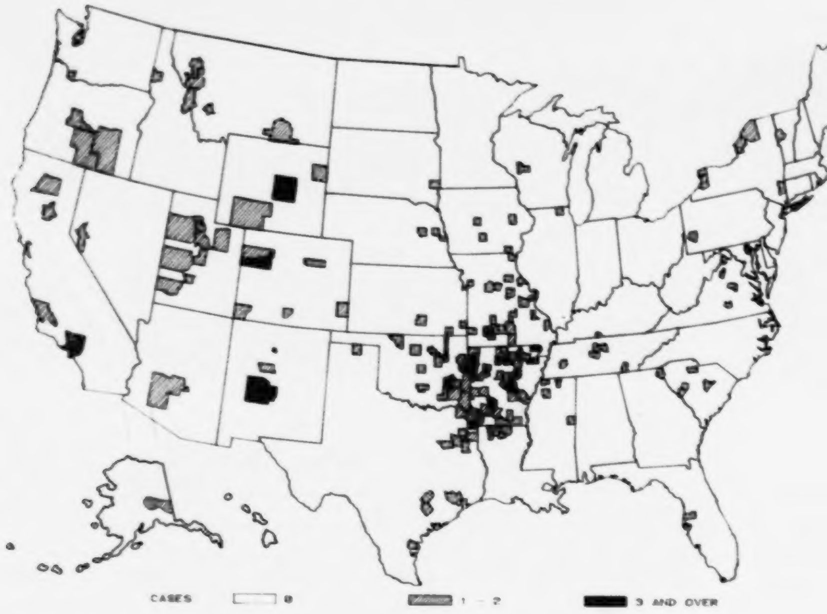
TULAREMIA — Reported cases per 100,000 population, by year, United States, 1955-1982



The upward trend in the reported occurrence of tularemia from 1978 through 1981 was interrupted in 1982. Preliminary 1983 data suggest that the trend has resumed. The upward trend may reflect a long-term natural cycle in the vectors and reservoirs of the disease, such as blood-sucking insects, usually ticks, and infected animals.

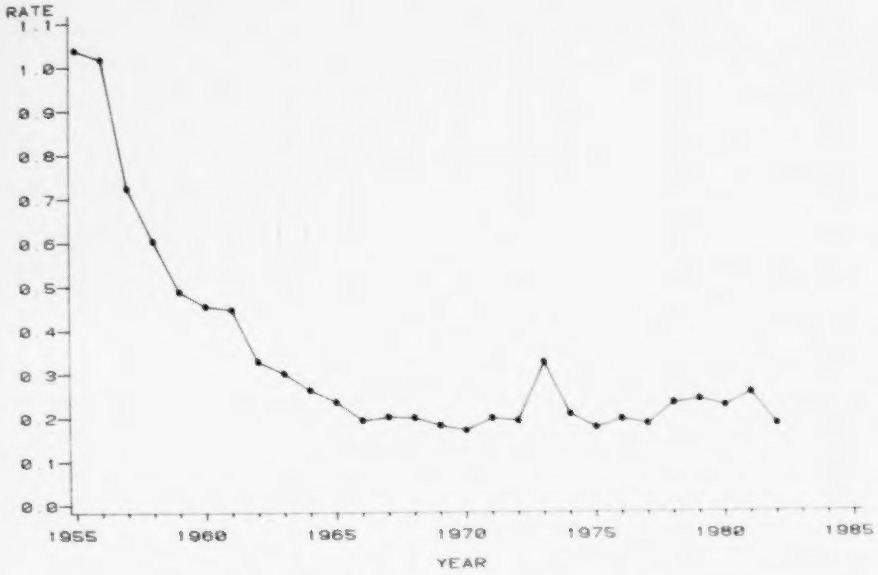
TULAREMIA

TULAREMIA — Reported cases, by county, United States, 1982


CASES
0
1 – 2
3 AND OVER

Geographic distribution of the tularemia cases reported for 1982 is similar to that of previ
years.

TYPHOID FEVER — Reported cases per 100,000 population, by year, United States, 1955-1982



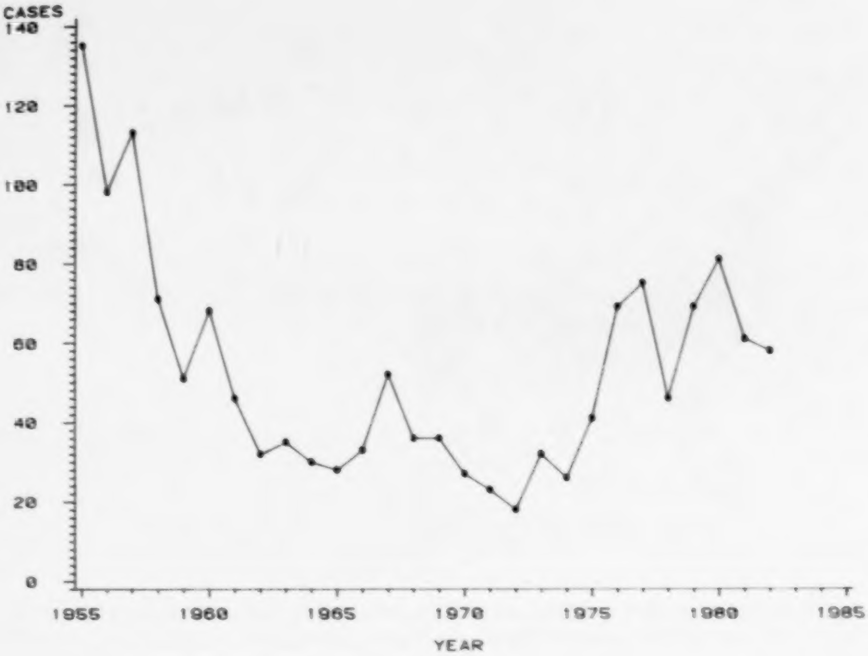
Large outbreaks of typhoid fever occurred in Florida in 1973 and in Texas in 1981. For 1982, 425 cases were reported. About half of the cases reported in the United States are acquired during foreign travel. The source of domestically acquired typhoid is usually a person who is a chronic carrier of *Salmonella typhi*, but some infections are acquired in laboratories.

TYPHOID FEVER

TYPHOID FEVER — Reported cases, by area and age group, United States, 1982

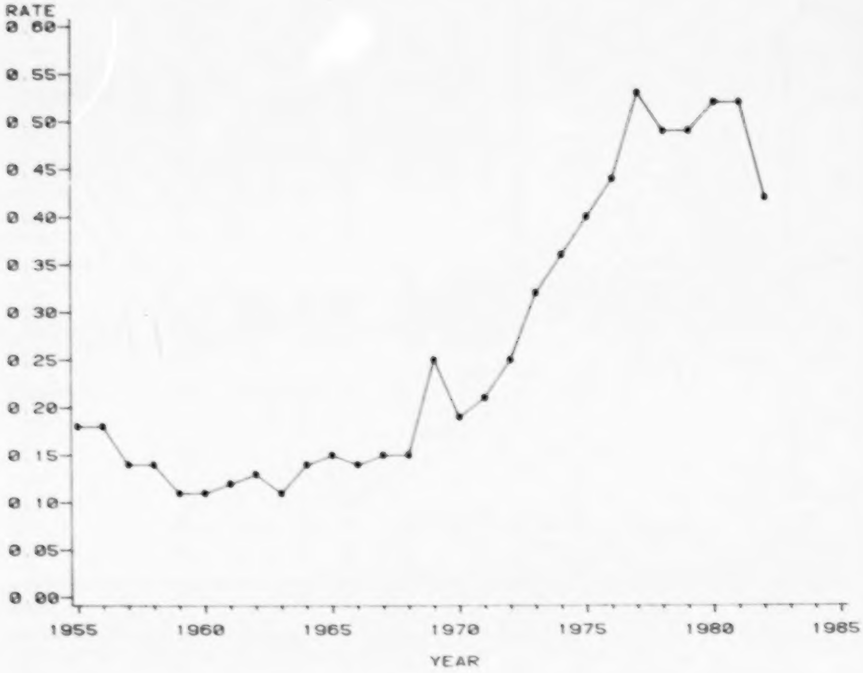
Area	Total	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60+	Unk.
United States	**425**	**4**	**47**	**45**	**40**	**38**	**55**	**47**	**55**	**31**	**14**	**42**	**7**
New England	**17**	-	-	**3**	**1**	**3**	**1**	**5**	**3**	-	-	**1**	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-
N.H.	-	-	-	-	-	-	-	-	-	-	-	-	-
Vt.	2	-	-	-	-	1	1	-	-	-	-	-	-
Mass.	13	-	-	3	1	2	-	4	2	-	-	1	-
R.I.	-	-	-	-	-	-	-	-	-	-	-	-	-
Conn.	2	-	-	-	-	-	-	1	1	-	-	-	-
Mid. Atlantic	**72**	-	**7**	**6**	**6**	**3**	**8**	**9**	**15**	**9**	**1**	**7**	**1**
N.Y. (excl. NYC)	11	-	-	1	1	1	2	1	2	-	1	2	-
N.Y.C.	37	-	3	3	3	-	3	5	8	8	-	4	-
N.J.	14	-	1	2	2	2	2	-	4	1	-	-	-
Pa.	10	-	3	-	-	-	1	3	1	-	-	1	1
E.N. Central	**45**	**1**	**4**	**8**	**1**	**1**	**7**	**2**	**6**	**6**	**2**	**5**	**2**
Ohio	6	-	1	2	-	1	1	-	-	-	-	-	1
Ind.	4	-	-	1	1	-	2	-	-	-	-	-	-
Ill.	12	1	1	1	-	-	2	-	3	2	1	-	1
Mich.	14	-	-	4	-	-	2	-	1	4	-	3	-
Wis.	9	-	2	-	-	-	-	2	2	-	1	2	-
W.N. Central	**17**	-	**1**	**1**	**4**	**1**	**2**	**2**	**1**	**1**	-	**4**	-
Minn.	9	-	-	1	2	1	1	1	1	1	-	1	-
Iowa	1	-	-	-	-	-	-	1	-	-	-	-	-
Mo.	4	-	1	-	2	-	-	-	-	-	-	1	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	1	-	-	-	-	-	1	-	-	-	-	-	-
Kans.	2	-	-	-	-	-	-	-	-	-	-	2	-
S. Atlantic	**52**	**1**	**6**	**3**	**4**	**3**	**7**	**5**	**5**	**3**	**5**	**9**	**1**
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	12	-	2	-	-	-	2	2	2	-	2	2	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	4	-	1	-	-	1	-	-	2	-	-	-	-
W. Va.	5	-	-	1	-	-	-	-	-	1	-	2	1
N.C.	4	1	1	-	-	-	-	1	-	-	-	1	-
S.C.	3	-	-	-	-	-	-	-	-	1	1	1	-
Ga.	3	-	-	-	-	-	2	1	-	-	-	-	-
Fla.	21	-	2	2	4	2	3	1	1	1	2	3	-
E.S. Central	**35**	-	**6**	**5**	**7**	**1**	**8**	**2**	-	-	-	**6**	-
Ky.	5	-	-	2	2	-	1	-	-	-	-	-	-
Tenn.	5	-	-	-	1	-	3	-	-	-	-	1	-
Ala.	10	-	3	-	-	-	1	1	-	-	-	5	-
Miss.	15	-	3	3	4	1	3	1	-	-	-	-	-
W.S. Central	**55**	-	**11**	**6**	**4**	**4**	**6**	**9**	**7**	**2**	**1**	**4**	**1**
Ark.	6	-	3	-	-	-	-	-	-	-	-	3	-
La.	4	-	-	-	2	-	-	-	1	-	-	-	1
Okla.	3	-	-	-	-	1	-	1	1	-	-	-	-
Tex.	42	-	8	6	2	3	6	8	5	2	1	1	-
Mountain	**14**	-	-	**2**	**1**	**1**	**1**	**1**	**4**	**3**	**1**	-	-
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	3	-	-	-	1	-	-	-	1	1	-	-	-
N. Mex.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ariz.	8	-	-	2	-	1	-	1	2	1	1	-	-
Utah	2	-	-	-	-	-	1	-	-	1	-	-	-
Nev.	1	-	-	-	-	-	-	-	1	-	-	-	-
Pacific	**118**	**2**	**12**	**11**	**12**	**21**	**15**	**12**	**14**	**7**	**4**	**6**	**2**
Wash.	10	1	1	-	2	-	-	-	1	1	-	4	-
Oreg.	4	-	-	1	-	1	2	-	-	-	-	-	-
Calif.	99	1	11	10	9	19	13	11	12	6	4	2	1
Alaska	1	-	-	-	-	-	-	-	1	-	-	-	-
Hawaii	4	-	-	-	1	1	-	1	-	-	-	-	1
Guam	-	-	-	-	-	-	-	-	-	-	-	-	-
P.R.	4	1	-	-	-	-	-	-	1	1	1	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	25	-	4	6	7	6	-	-	1	1	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-

TYPHUS FEVER, FLEA-BORNE (endemic, murine) — Reported cases, by year, United States, 1955-1982



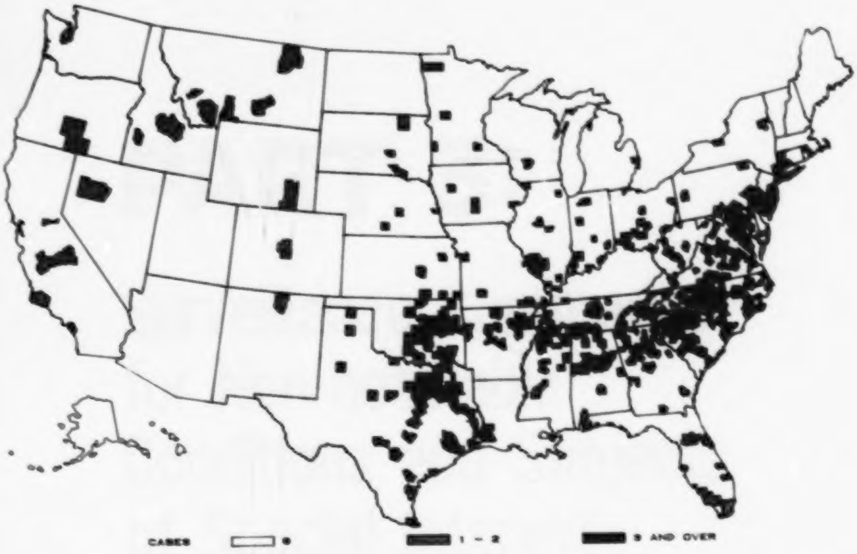
For 1982, 58 cases of murine typhus were reported from eight states. Forty-one of the cases were reported from Texas and nine from Hawaii.

TYPHUS FEVER, TICK-BORNE (Rocky Mountain spotted fever) — Reported cases per 100,000 population, by year, United States, 1955-1982



A total of 976 cases of Rocky Mountain spotted fever were reported to CDC in 1982, for an incidence of 0.42 cases/100,000 population.

TYPHUS FEVER, TICK-BORNE (Rocky Mountain spotted fever) — Reported cases, by county, United States, 1982



Of the total reported cases of Rocky Mountain spotted fever, 68% were reported from seven states, listed in descending order by number of cases: North Carolina, South Carolina, Oklahoma, Virginia, Texas, Tennessee, and Georgia.

PART 3:

Surveillance Summaries for Non-notifiable Conditions and Subjects of Special Interest

NON-NOTIFIABLE CONDITIONS — Cases of acute condtions optionally reported by certain areas, 1982

Area	Giardiasis	Histo-plasmosis	Infectious mono-nucleosis	Meningitis (Bacterial & unspecified	Reye syndrome[1]	Streptococcal sore throat & scarlet fever	Toxo-plasmosis
No. Cases Reported	**15,076**	**524**	**7,567**	**8,127**	**222**	**259,719**	**157**
New England	**247**	—	**2,605**	**201**	**13**	**56,217**	—
Maine	NA	NN	NN	NA	4	NA	NN
N.H.	103	NN	5	27	1	239	NN
Vt.	144	NN	50	12	2	NN	NN
Mass.	NN	NN	NN	NN	1	14,871	NN
R.I.	—	—	39	40	3	9,641	—
Conn.	—	—	2,511	122	2	31,466	—
Mid. Atlantic	**701**	**4**	**3,222**	**1,215**	**25**	**2,761**	—
N.Y. (excl. NYC)	NN	2	3,222	471	11[2]	NN	NN
N.Y.C.	201	—	—	325	—	2,753	—
N.J.	NA	NA	NA	NA	4	NA	NA
Pa.	500	2	—	419	10	8	—
E.N. Central	**1,857**	**33**	—	**1,879**	**46**	**43,437**	—
Ohio	—	—	—	434	10	11,611	—
Ind.	203	—	—	271	4	—	—
Ill.	1,427	33	NN	581	14	19,524	NN
Mich.	—	—	—	469	13	12,302	—
Wis.	227	—	—	124	5	—	—
W.N. Central	**1,437**	**310**	**373**	**594**	**19**	**16,536**	**48**
Minn.	386	110	NN	193	7	NN	7
Iowa	204	16	199	170	2	NN	NN
Mo.	235	183	83	5	4	—	36
N. Dak.	119	—	82	10	1	4,545	—
S. Dak.	100	1	7	59	2	2,049	5
Nebr.	NN	—	NN	71	3	NA	NN
Kans.	393	—	2	86	—	9,942	—
S. Atlantic	**2,532**	**22**	**910**	**1,596**	**37**	**31,228**	**68**
Del.	78	—	—	24	1	2,000	1
Md.	—	—	—	162	5	12,962	—
D.C.	3	—	—	7	—	—	—
Va.	191	12	548	290	6	82	8
W. Va.	25	—	362	94	3	13,470	—
N.C.	NN	NN	NN	247	7	NN	NN
S.C.	368	7	NN	103	3	NN	2
Ga.	732	—	—	2	7	2,714	35
Fla.	1,135	3	NA	667	5	NA	22
E.S. Central	**718**	**136**	**349**	**334**	**11**	**8,147**	**4**
Ky.	31	5	289	53	2	3,362	—
Tenn.	NN	NN	NN	NN	—	NN	NN
Ala.	435	131	—	227	8	—	—
Miss.	252	—	60	54	1	4,785	4
W.S. Central	**841**	**11**	**7**	**1,085**	**33**	**47,473**	**7**
Ark.	117	8	5	45	4	—	7
La.	NA	2	2	NA	3	NA	—
Okla.	242	1	—	201	1	—	—
Texas	482	NN	NN	839	25	47,473	NN
Mountain	**1,491**	**3**	**27**	**617**	**20**	**22,492**	**6**
Mont.	153	1	1	45	—	—	—
Idaho	108	2	NN	43	2	NN	3
Wyo.	11	—	—	21	—	17,901	—
Colo.	496	—	—	155	2	NN	2
N. Mex.	31	—	—	83	6	—	—
Ariz.	435	—	—	65	3	—	—
Utah	257	—	26	115	6	4,517	1
Nev.	—	—	—	90	1	74	—
Pacific	**5,252**	**5**	**74**	**606**	**18**	**31,428**	**24**
Wash.	956	NN	NN	181	2	NN	—
Oreg.	735	NN	NN	110	1	NN	NN
Calif.	3,351	5	30	222	13	24,290	23
Alaska	210	—	—	47	—	3,664	—
Hawaii	NN	—	44	46	2	3,474	1
Guam	2	—	6	—	NA	649	—
P.R.	—		26	191	NA	5	—
V.I.	100	—	—	—	NA	—	1
Pac. Trust Terr.	—	NN	NN	3	NA	114	NN
CNMI	NA	NA	NA	NA	NA	NA	NA

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[1] Cases reported by surveillance program for the period December 1, 1981-November 30, 1982

[2] Includes New York City.

NON-NOTIFIABLE CONDITIONS — Cases of acute conditions optionally reported by certain areas, 1982 - (continued)

Fungal diseases	
Actinomycosis	Mo. 1, Va. 2, V.I. 1
Blastomycosis	Ohio 1, Ill. 2, Wis. 22, Minn. 1, Iowa 3, Mo. 2, N.Dak. 1, Va. 9, N.C. 4, S.C. 2, Ky. 3, Ark. 10
Coccidioidomycosis	Ill. 1; Minn. 8; Iowa 2, Mo. 4, Kans. 2, Va. 1, S.C. 1, Ark. 2, Okla. 1, Idaho 5, N. Mex. 1, Ariz. 251, Utah 2, Calif. 414
Cryptococcosis	Pa. 7, Ohio 3, Ill. 1, Minn. 2, Iowa 4, Mo. 125, S. Dak. 1, Va. 2, S.C. 18, Ga. 3, Fla. 6, La. 3, Okla. 1, Utah 1; Calif. 4
Nocardiosis	Vt. 2, Mo. 1; S. Dak. 3, Kans. 1; Va. 13, Idaho 1
Rickettsial diseases	
Q fever	Wis. I, Mo. 1, Kans. 1, La. 1, Okla. 1, Tex. 2, Idaho 2, Colo. 3, Ariz. 1, Wash. 1, Oreg. 5, Calif. 22
Viral diseases	
Colorado tick fever	Ill. 1; Va. 1, Mont. 23, Idaho 2, Wyo. 7, Colo. 176, Utah 62, Oreg. 1, Calif. 3
Trachoma	Utah 1, Oreg. 2

Conditions included in this table are not officially notifiable to the Centers for Disease Control but are reported optionally by some states. These data should be used with great caution and should in no way be considered a representative national sample. A summary of every optionally reported condition is not included because of the limitations of space and infrequency of reports. Unpublished data will be made available to individuals on specific request.

In 1980, 49 states, Upstate New York, New York City, and the District of Columbia reported a total of 1,297,606 abortions to CDC, a 4% increase over the total for 1979. (See table on following page.) Since 1969, when CDC began collecting information on legal abortions, the total reported number of abortions performed each year has increased. The annual rate of increase declined steadily between 1976 and 1980. The national abortion rate rose from 24 abortions/1,000 women ages 15-44 years in 1979 to 25 in 1980. The 1980 national abortion ratio was 359/1,000 live births, an increase of 1% over the abortion ratio computed for 1979.

As in previous years, women who obtained abortions in 1980 were most likely to be young, white, unmarried, and of low parity. The age distribution of women obtaining abortions has gradually shifted from the ≤ 19-year-old group to the 20- to 24-year-old group, whereas the percentage of women obtaining abortions in the ≥ 25 year age group has remained the same. In 1980, as in previous years, women at each end of the reproductive-age-distribution scale had the highest abortion-to-live birth ratio. More than 90% of reported abortions were performed in the woman's state of residence.

ABORTION

ABORTION — Reported number of legal abortions, by state of occurrence, abortion ratios, and abortion rates, 1980

State	Abortions[1]	Ratio[2]	Rate[3]
Alabama	17,920[4]	283	20
Alaska	1,890[5]	202	18
Arizona	9,278	185	15
Arkansas	5,995	161	12
California	203,754	506	36
Colorado	17,601	354	24
Connecticut	14,835	383	21
Delaware	3,726	422	26
Dist of Columbia	27,183	*	160
Florida	61,659	466	30
Georgia	33,288	361	25
Hawaii	6,462	357	28
Idaho	2,553	127	12
Illinois	67,514	355	25
Indiana	16,505	187	13
Iowa	6,895[4]	143	11
Kansas	11,791	290	22
Kentucky	7,484	123	9
Louisiana	16,525	201	17
Maine	4,027	244	16
Maryland	27,778	464	27
Massachusetts	43,948	605	32
Michigan	45,455	313	21
Minnesota	19,028	289	20
Mississippi	5,543	116	10
Missouri	19,043	242	17
Montana	3,471	244	19
Nebraska	6,060	222	17
Nevada	7,300	536	37
New Hampshire	3,432[4]	251	16
New Jersey	30,239	314	18
New Mexico	5,671	213	18
New York	150,997	629	37
(City)	(101,967)[6]	(952)	
(Upstate)	(49,030)	(369)	
North Carolina	32,006	379	23
North Dakota	2,649[7]	221	18
Ohio	42,227	250	17
Oklahoma	11,264	216	16
Oregon	15,735	365	25
Pennsylvania	65,777	415	25
Rhode Island	6,625	545	31
South Carolina	12,274	236	16
South Dakota	1,308	99	9
Tennessee	23,274	337	22
Texas	84,459	309	25
Utah	4,086	98	12
Vermont	3,227	415	26
Virginia	31,958	408	24
Washington	30,270	446	31
West Virginia	3,057[4]	102	7
Wisconsin	21,754	291	20
Wyoming	806	76	7
Total	1,297,606	359	25

[1] Abortion data from central health agency unless otherwise noted

[2] Abortions per 1,000 live births (live birth data from central health agency except for Alaska, Iowa, Kentucky, New Hampshire, and West Virginia). Live birth data for these states from National Center for Health Statistics, *Monthly Vital Statistics Report*, Vol 29, No 13, September 17, 1981

[3] Abortions per 1,000 females ages 15-44 (number of females ages 15-44 from 1980 Census of Population and Housing, Provisional Estimates of Social, Economic, and Housing Characteristics, PHC80-S1-1)

[4] Reported from hospitals and/or facilities in state

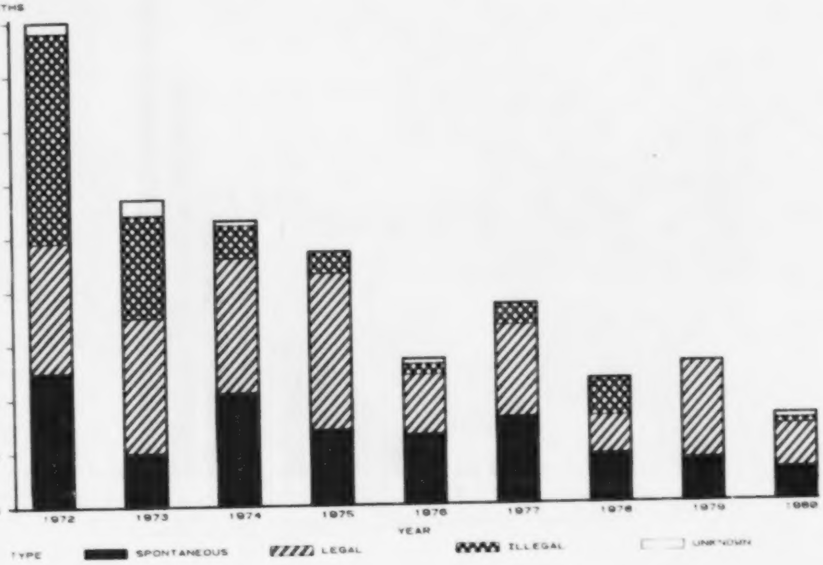
[5] Data from The Alan Guttmacher Institute

[6] Reported from New York City Health Department

[7] Estimate based on number of abortions reported September-December

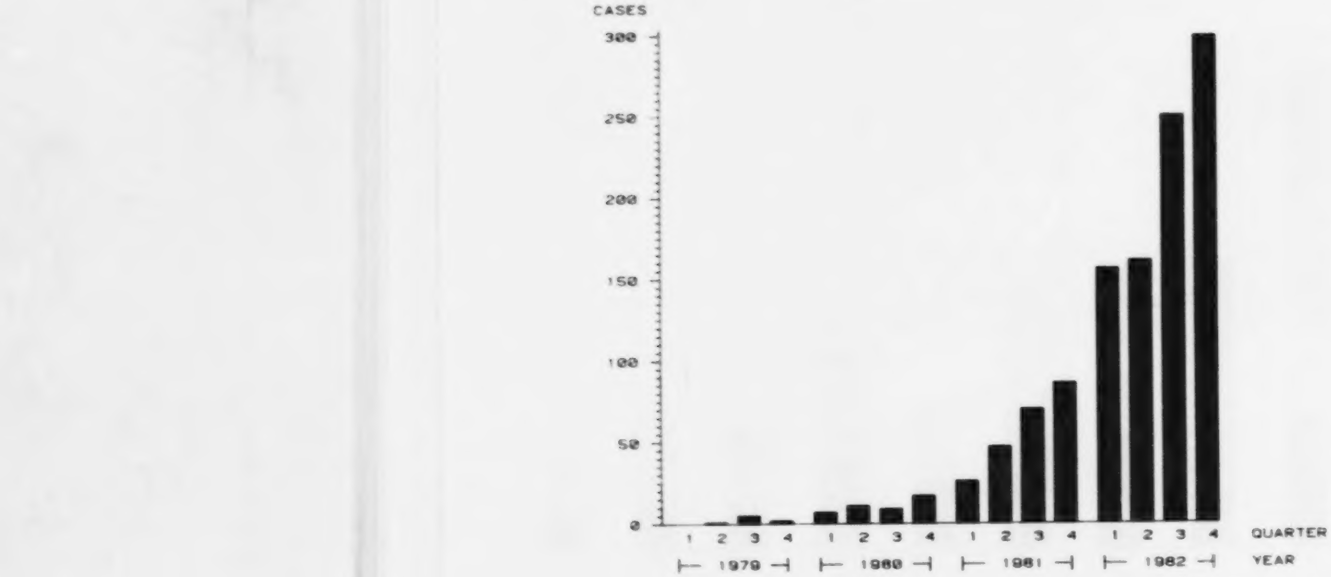
*Greater than 1,000 abortions per 1,000 live births

ABORTION — Abortion-related deaths, by year, United States, 1972-1980



The total number of deaths associated with all three categories of abortion (legal, illegal, and spontaneous) has decreased steadily since 1972, reaching a low of 16 reported deaths in 1980. Eight women died following legal abortion in 1980, as did 18 in 1979. One death was reported in association with illegal abortion in 1980, whereas no women were reported to have died from illegal abortion in 1979. Six deaths were reported in association with spontaneous abortion in 1980, as compared with eight in 1979.

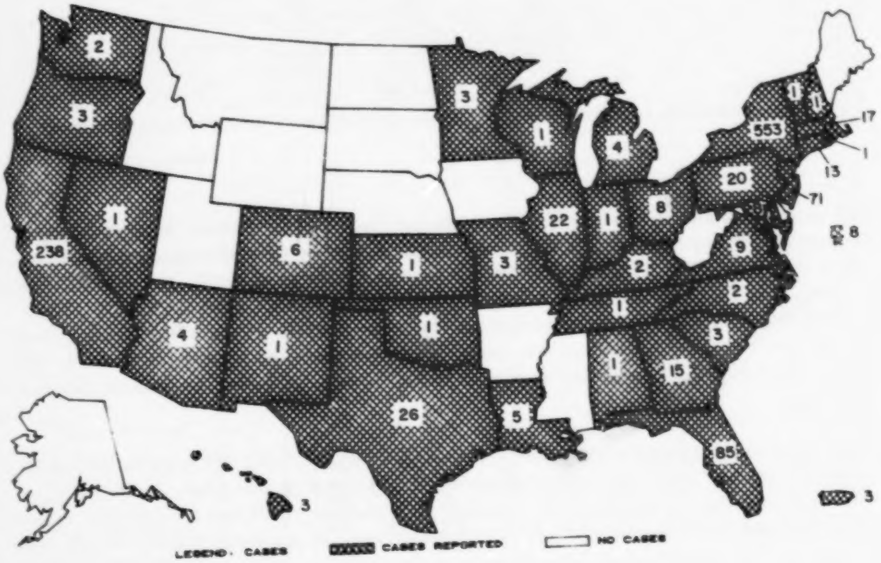
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) — Reported cases, by quarter, United States, 1979-1982



By the end of 1982, physicians and health departments in the United States and Puerto Rico had reported a total of 1,147 cases of acquired immunodeficiency syndrome (AIDS). Of these 1,147 cases, eight (1%) were diagnosed in 1979, 44 (4%) in 1980, 229 (20%) in 1981, and 866 (76%) in 1982. *Pneumocystis carinii* pneumonia (PCP) was the most commonly reported opportunistic infection among AIDS patients, accounting for approximately 47% of the primary diagnoses; 27% of the patients had Kaposi's sarcoma (KS); 10% had both PCP and KS; 15% had another opportunistic infection without either KS or PCP. Of the 1,147 patients, 591 (52%) are known to have died. The proportion of patients with KS alone who died (31%) is approximately half that of the patients who had opportunistic infections and died (59%). Over 90% of the AIDS patients have been between the ages of 20 and 49 years; 48% have been 30-39 years old. Cases occurred among whites, blacks, and Hispanics in the United States. Only 67 (6%) cases of AIDS have been reported among females.

Groups with an increased incidence of AIDS were homosexual and bisexual males (73% of the cases) and present or past intravenous drug users (16%). Other groups of AIDS patients include persons born in Haiti but living in the United States at the time of diagnosis (5% of AIDS cases) and persons with hemophilia (1% of AIDS cases). Fifty-one (5%) cases could not be placed in any of the above groups; approximately half of these represent patients for whom information regarding risk factors is either absent or incomplete. The remainder includes, in order of decreasing frequency, (1) patients with no identifiable risk factors, (2) heterosexual sexual partners of AIDS patients or of other persons in risk groups, and (3) recipients of blood transfusions. Of the 67 females with AIDS, 55% were drug users, 10% were Haitians who were recent entrants into the United States, and 34% were in neither of these risk groups.

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) — Reported cases, by state, United States, 1979-1982


2
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3
LEGEND: CASES
▨ CASES REPORTED
☐ NO CASES

New York City reported 45% of the 1,147 cases of AIDS; San Francisco, 10%; and Los Angeles, 6%. By the end of 1982, cases had been reported from 36 states, the District of Columbia, and Puerto Rico.

CONGENITAL MALFORMATIONS — Number of monitored total (live and still) births, by U.S. Census Region (including Puerto Rico), Birth Defects Monitoring Program[1], 1977-1981

Census Region	1981	1980	1979	1978	1977
Northeast	115,005	120,324	174,435	179,414	207,049
North Central	323,984	306,371	405,577	369,350	406,662
South[2]	231,620	208,088	263,360	244,515	274,169
West	194,050	134,959	186,898	180,872	189,210
Total, United States[2]	**864,659**	**769,742**	**1,030,270**	**974,151**	**1,077,090**

[1] Discharge data reported by participating hospitals through the Commission on Professional and Hospital Activities, Ann Arbor, Michigan.
[2] Includes Puerto Rico.

The birth defects data reported here are selected from those collected through the Birth Defects Monitoring Program (BDMP), which is conducted by CDC and uses data provided under contract by the Commission on Professional and Hospital Activities. Since 1970, data on births of 12 million infants have been included in the BDMP. Currently 865,000 births from 930 hospitals are reported annually in BDMP, about 24% of the births in the United States. For the period covered in this report, the incidence of the majority of birth defects neither substantially increased nor decreased. Several defects, however, did show noteworthy patterns.

The most striking changes in reported incidence in the period 1977-1981 were for two cardiovascular defects, ventricular septal defect (VSD) and patent ductus arteriosus (PDA). Over the 4-year interval, the rate for VSD increased 48%, and that for PDA increased 65%. Since 1970, the reported incidence of these two malformations has more than tripled. The increase in PDA rates is thought to be at least partly due to an increased survival of very low birth-weight babies and to better case ascertainment. On the other hand, the increase in VSD rates probably reflects a true increase. A follow-up study in Atlanta, Georgia, showed that the spontaneous closure rates at 1 year of age did not change between 1970 and 1976, suggesting that the increase in VSD rates is not explained by better reporting of less severe cases which, in turn, suggests that the overall level of ascertainment has not changed markedly.

Two other defects, tracheo-esophageal fistula (TEF) and renal agenesis, had substantially increased rates in the period 1977-1981. However, the rate for TEF was 1.9/10,000 births in 1970, virtually identical to the rate in 1981; no consistent trend in rates of TEF over the decade can be discerned. The reported rate of renal agenesis has doubled since 1970. This apparent increase has not been linked to factors that would suggest improved reporting, such as more autopsies following fatal outcomes or improved diagnostic techniques. The cause of the increase in renal agenesis, whether real or artifactual, remains unknown.

The largest decrease in rates between 1977 and 1981 was for anencephaly, which declined 5%. Since 1970 this defect has declined 38%, or about 5% per year. Spina bifida showed similar annual decreases in rates until 1977, when the incidence appeared to have stabilized; even so, the incidence of spina bifida in 1981 was 29% below the rate in 1970. The reasons for these changes are not known.

CONGENITAL MALFORMATIONS — Reported incidence of selected congenital malformations, by U.S. Census Region (including Puerto Rico), Birth Defects Monitoring Program[1], 1977-1981

Malformation/ Census Region	1981 No.	1981 Rate*	1980 No.	1980 Rate*	1979 No.	1979 Rate*	1978 No.	1978 Rate*	1977 No.	1977 Rate*
Anencephaly										
Northeast	42	3.7	45	3.7	58	3.3	59	3.3	81	3.9
North Central	111	3.4	95	3.1	157	3.9	148	4.0	146	3.6
South[2]	92	4.0	79	3.8	96	3.6	89	3.6	102	3.7
West	57	2.9	34	2.5	60	3.2	64	3.5	72	3.8
Total, United States[2]	**302**	**3.5**	**263**	**3.3**	**371**	**3.6**	**360**	**3.7**	**401**	**3.7**
Spina bifida w/out anencephaly										
Northeast	58	5.0	45	3.7	92	5.3	85	4.7	94	4.5
North Central	171	5.3	159	5.2	203	5.0	192	5.2	209	5.1
South[2]	142	6.1	145	7.0	141	5.4	159	6.5	154	5.6
West	66	3.4	54	4.0	80	4.3	65	3.6	68	3.6
Total, United States[2]	**437**	**5.1**	**403**	**5.2**	**516**	**5.0**	**501**	**5.1**	**525**	**4.9**
Ventricular septal defect										
Northeast	203	17.7	176	14.6	221	12.7	194	10.8	213	10.3
North Central	465	14.4	347	11.3	444	10.9	360	9.7	364	8.9
South[2]	267	11.5	216	10.4	234	8.9	183	7.5	237	8.6
West	258	13.3	170	12.6	234	12.5	200	11.0	192	10.1
Total, United States[2]	**1,193**	**13.8**	**909**	**11.8**	**1,133**	**11.0**	**937**	**9.6**	**1,006**	**9.3**
Patent ductus arteriosus										
Northeast	281	25.3	227	18.9	293	16.8	234	13.0	229	11.0
North Central	754	23.3	532	17.4	750	18.5	563	15.2	537	13.2
South[2]	445	19.2	370	17.8	395	15.0	405	16.6	421	15.3
West	462	23.8	272	20.1	377	20.1	319	17.6	288	15.2
Total, United States[2]	**1,942**	**22.6**	**1,401**	**18.2**	**1,815**	**17.6**	**1,521**	**15.6**	**1,475**	**13.7**
Hydrocephalus w/out spina bifida										
Northeast	51	4.4	50	4.2	78	4.5	70	3.9	94	4.5
North Central	180	5.6	129	4.2	179	4.4	166	4.5	192	4.7
South[2]	145	6.3	101	4.9	124	4.7	109	4.5	140	5.1
West	93	4.8	49	3.6	72	3.9	67	3.7	74	3.9
Total, United States[2]	**469**	**5.4**	**329**	**4.3**	**453**	**4.4**	**412**	**4.2**	**500**	**4.6**
Cleft palate w/out cleft lip										
Northeast	58	5.0	48	4.0	73	4.2	74	4.1	132	6.4
North Central	173	5.3	161	5.3	219	5.4	193	5.2	206	5.1
South[2]	110	4.7	95	4.6	137	5.2	105	4.3	131	4.8
West	108	5.6	72	5.3	104	5.6	96	5.3	117	6.2
Total, United States[2]	**449**	**5.2**	**376**	**4.8**	**533**	**5.2**	**468**	**4.8**	**586**	**5.4**
Cleft lip with or w/out cleft palate										
Northeast	80	7.0	79	6.6	98	5.6	138	7.7	162	7.8
North Central	295	9.1	257	8.4	342	8.4	337	9.1	398	9.8
South[2]	188	8.1	159	7.6	193	7.3	186	7.6	225	8.2
West	195	10.0	120	8.9	149	8.0	178	9.8	181	9.6
Total, United States[2]	**758**	**8.8**	**615**	**8.0**	**782**	**7.6**	**839**	**8.6**	**966**	**9.0**

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[1] Discharge data reported by participating hospitals through the Commission on Professional and Hospital Activities, Ann Arbor, Michigan

[2] Includes Puerto Rico

*Per 10,000 total births

Note This table is continued on the following page

CONGENITAL MALFORMATIONS — Reported incidence of selected congenital malformations, by U.S. Census Region (including Puerto Rico), Birth Defects Monitoring Program[1], 1977-1981 (continued)

Malformation/ Census Region	1981 No.	 Rate*	1980 No.	 Rate*	1979 No.	 Rate*	1978 No.	 Rate*	1977 No.	 Rate*
Clubfoot w/out CNS defects										
Northeast	359	31.2	360	29.9	543	31.1	565	31.5	588	28.4
North Central	874	27.0	907	29.6	1,174	28.9	943	25.5	1,064	26.2
South[2]	445	19.2	444	21.3	533	20.2	435	17.8	473	17.3
West	364	18.8	252	18.7	399	21.3	348	19.2	360	19.0
Total, United States[2]	**2,042**	**23.6**	**1,963**	**25.5**	**2,649**	**25.7**	**2,291**	**23.5**	**2,485**	**23.1**
Reduction deformity										
Northeast	35	3.0	52	4.3	61	3.5	48	2.7	57	2.8
North Central	137	4.2	117	3.8	145	3.6	124	3.4	161	4.0
South[2]	78	3.4	72	3.5	85	3.2	90	3.7	70	2.6
West	61	3.1	52	3.9	74	4.0	57	3.2	74	3.9
Total, United States[2]	**311**	**3.6**	**293**	**3.8**	**365**	**3.5**	**319**	**3.3**	**362**	**3.4**
Tracheo-esophageal fistula										
Northeast	23	2.0	24	2.0	35	2.0	33	1.8	33	1.6
North Central	58	1.8	67	2.2	69	1.7	54	1.5	55	1.4
South[2]	40	1.7	35	1.7	41	1.6	27	1.1	37	1.3
West	56	2.9	26	1.9	38	2.0	27	1.5	29	1.5
Total, United States[2]	**177**	**2.0**	**152**	**2.0**	**183**	**1.8**	**141**	**1.4**	**154**	**1.4**
Rectal atresia and stenosis										
Northeast	38	3.3	50	4.2	63	3.6	62	3.5	72	3.5
North Central	125	3.9	108	3.5	124	3.1	128	3.5	134	3.3
South[2]	69	3.0	66	3.2	80	3.0	64	2.6	72	2.6
West	70	3.6	36	2.7	54	2.9	53	2.9	68	3.6
Total, United States[2]	**302**	**3.5**	**260**	**3.4**	**321**	**3.1**	**307**	**3.2**	**346**	**3.2**
Renal agenesis										
Northeast	22	1.9	11	0.9	18	1.0	24	1.3	27	1.3
North Central	48	1.5	46	1.5	53	1.3	47	1.3	48	1.2
South[2]	25	1.1	25	1.2	30	1.1	20	0.8	21	0.8
West	28	1.4	13	1.0	25	1.3	38	2.1	15	0.8
Total, United States[2]	**123**	**1.4**	**95**	**1.2**	**126**	**1.2**	**129**	**1.3**	**111**	**1.0**
Hypospadias[3]										
Northeast	342	57.7	365	58.9	467	52.2	507	55.2	583	54.7
North Central	981	58.9	856	54.5	1,017	48.8	872	45.8	972	46.4
South[2]	557	46.9	488	45.8	610	45.2	533	42.3	533	37.8
West	469	47.2	308	44.6	473	49.3	416	44.6	463	47.5
Total, United States[2]	**2,349**	**52.9**	**2,017**	**51.1**	**2,567**	**48.5**	**2,238**	**46.4**	**2,551**	**46.0**
Down syndrome										
Northeast	105	9.1	107	8.9	144	8.3	167	9.3	175	8.5
North Central	236	7.3	227	7.4	332	8.2	271	7.3	290	7.1
South[2]	155	6.7	118	5.7	191	7.3	185	7.6	197	7.2
West	160	8.2	116	8.6	138	7.4	168	9.3	157	8.3
Total, United States[2]	**656**	**7.6**	**568**	**7.4**	**805**	**7.8**	**791**	**8.1**	**819**	**7.6**

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[1] Discharge data reported by participating hospitals through the Commission on Professional and Hospital Activities, Ann Arbor, Michigan

[2] Includes Puerto Rico

[3] Rates per 10,000 male births

*Per 10,000 total births

Deaths per 100,000 population for the five leading causes of death United States, 1982, 1981, and 1972

Rank	Cause of death	1982[1]	Percentage of total deaths	1981[1]	Percentage of total deaths	1972[2]	Percentage of total deaths
1	Diseases of the heart	327.8	38.2	330.5	38.1	361.2	38.5
2	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	188.1	21.9	183.8	21.2	169.2	17.6
3	Cerebrovascular diseases	68.9	8.0	71.3	8.3	101.9	10.9
4	Accidents and adverse effects	41.3	4.8	44.2	5.1	55.2	5.9
5	Chronic obstructive pulmonary diseases and allied conditions	25.9	3.0	26.1	3.0	. . *	*

[1] Provisional data.

[2] Rates for 1972 have been revised from those published in the *Vital Statistics of the United States* reflecting revised populations from the 1980 census. Data for 1972 based on 50% sample of death records.

*In 1972, pneumonia and influenza ranked as the 5th leading cause of death with a rate of 29.9, comprising 3.0% of total deaths. Deaths from chronic obstructive pulmonary diseases and allied conditions were assigned to two categories, Nos. 490-493 and 519.3, Eighth Revision of the *International Classification of Diseases (ICD)*. The most nearly comparable title (bronchitis, emphysema, and asthma) ranked as the 10th leading cause of death.

Source: National Center for Health Statistics. *Vital Statistics of the United States, Vol. II,* for 1972; *Monthly Vital Statistics Report, Provisional Data, Annual Summary of Births, Deaths, Marriages, and Divorces: United States,* 1982.

Deaths are classified according to the Eighth Revision, *ICD,* for 1972 and according to the Ninth Revision, ICD, for 1981 and 1982.

PREMATURE DEATH

Table V, a new monthly table introduced in the March 1982 issue of the *MMWR*, is designed to display a variety of measures that gauge the relative importance and magnitude of certain public health issues. The first column of the table, years of potential life lost before age 65, is generated annually and is based on age at time of death for all persons who die between the ages of 1 and 65 years. Generally, years of potential life lost, by cause of death, in 1981 reflects relatively little change from those in 1980. Cerebrovascular diseases replaced chronic liver disease and cirrhosis as the fifth leading cause of years of potential life lost before age 65; death rates for chronic liver disease and cirrhosis have declined 26% in the past 10 years from a peak of 15.9/100,000 population in 1973. Chronic obstructive pulmonary diseases and allied conditions replaced diabetes mellitus as the eighth leading cause. The number of deaths attributed to chronic obstructive pulmonary diseases and allied conditions increased 23% for persons ages 1-44 years; however, only a 5% increase in the number of years of potential life lost was attributed to these diseases.

Overall, the number of years of potential life lost for persons ages 1-65 years fell 1% from 1980 to 1981. A large proportion of this decrease was attributed to a 4% decrease in years of potential life lost due to fatalities associated with motor-vehicle and other accidents; however, accidents continued to be the leading cause of premature death. Although the number of deaths from suicide and homicide decreased 1%, the number of years of potential life lost from these causes increased slightly, 0.1%, a shift that can be attributed to a 6% increase in the number of suicides of persons 1-34 years of age. When grouped, suicide, homicide, and fatalities related to accidents caused 40% of the total years of potential life lost in 1981.

At least one state, Kentucky, has adopted use of the index, years of potential life lost before age 65, for its annual vital statistics report. However, Kentucky, chose to include infants < 1 year of age (i.e., all livebirths) in their calculation of potential years of life lost. When this method is used, certain causes of death in early infancy and deaths caused by congenital malformations are the leading causes of premature death in Kentucky for 1982. Other states and local health departments have made inquiries into calculations of the new index, and it is expected that other state and local health departments will adopt similar measures in order to evaluate their individual prevention programs more fully.

Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65[1]		Estimated mortality 1982		Estimated number of of physician contacts
	1981	1980	Number[2]	Rate/100,000[2]	1982[3]
ALL CAUSES (TOTAL)	9,879,590	10,006,060	1,982,240	857.8	1,114,900,000
Accidents and adverse effects (E800-E949)	2,587,140	2,684,850	94,320	40.8	59,800,000
Malignant neoplasms (140-208)	1,821,900	1,804,120	435,760	188.6	21,600,000
Diseases of heart (390-398, 402, 404-429)	1,621,290	1,636,510	755,510	326.9	63,500,000
Suicides, homicides (E950-E978)	1,403,560	1,401,880	49,230	21.3	–
Cerebrovascular diseases (430-438)	275,000	280,430	159,100	68.8	8,400,000
Chronic liver disease and cirrhosis (571)	267,350	301,070	27,180	11.8	1,700,000
Pneumonia and influenza (480-487)	123,420	124,830	49,040	21.2	11,500,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	116,280	110,530	59,820	25.9	17,600,000
Diabetes mellitus (250)	105,960	117,340	33,130	14.3	28,600,000
Prenatal care[4]					26,900,000
Infant mortality[4]			42,370	11.2	

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[1] Years of potential life lost for persons between 1-65 years of age at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics (NCHS), *Monthly Vital Statistics Report (MVSR)*, Vol. 30, No. 13, December 20, 1982, and the *MVSR* Vol. 29, No. 13, September 17, 1981, for 1981 and 1980, respectively, multiplied by the difference between 65 years and the age at the mid-point of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] Deaths and death rates by cause are estimated by NCHS (*MVSR* Vol. 32, No. 1, April 18, 1983, pp. 8-9) using the underlying cause of death from a 10% systematic sample of death certificates received in state vital statistics offices and population estimates from the Bureau of the Census.

[3] IMS America *National Disease and Therapeutic Index (NDTI)*, Monthly reports, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter. The accuracy of the estimates is unknown, and the number provided should be used only as a gross indicator of morbidity.

[4] "Prenatal care" (*NDTI*) and "Infant mortality" (*MVSR* Vol. 32, No. 1, April 18, 1983, p.10) are included in the table because "Years of potential life lost" does not reflect deaths of children <1 year of age.

SUDDEN DEATHS AMONG INDOCHINESE REFUGEES

DEATHS — Sudden, unexplained, nighttime deaths among Indochinese refugees, United States, July 1977 - December 1982

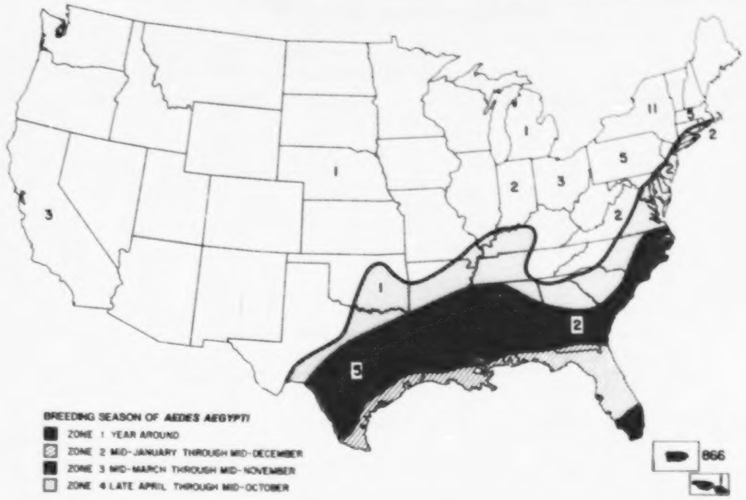
	Number of deaths		
Ethnic Origin	1982	July 1977-December 1981	Total deaths[1]
Laotian Hmong	9	25	34
Other Laotian	9	10	19
Kampuchean	3	4	7
Vietnamese	5	4	9
All	26	43	69

[1] Reported to CDC since February 1981

In 1982, twenty-six previously well male refugees from Southeast Asia died suddenly and unexpectedly at night. Information currently available suggests that all except one of these persons were sleeping at the time of death. The ages ranged from 17 to 51 years (median 29.5 years), with 20 (77%) persons being 25-44. Results of routine autopsies, including toxicologic studies, have not documented a cause of death. In the period 1977-1982, there were 69 such deaths (all reported to CDC since February 1981). Only one victim was a female.

Congenital anomalies in the atrioventricular junction of the cardiac-conduction system associated with a maldeveloped aortic root have been observed in 12 of 13 hearts studied in detail. These anomalies may be the substrate for cardiac electrical instability; the sleep-related mechanism that triggers these deaths, however, remains unknown.

DENGUE — Confirmed imported cases and distribution of *Aedes aegypti* mosquitoes in the United States, 1982


3
1
1
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866
BREEDING SEASON OF *AEDES AEGYPTI*
■ ZONE 1 YEAR AROUND
▨ ZONE 2 MID-JANUARY THROUGH MID-DECEMBER
■ ZONE 3 MID-MARCH THROUGH MID-NOVEMBER
☐ ZONE 4 LATE APRIL THROUGH MID-OCTOBER

In 1982, 144 cases of dengue-like illness were reported to CDC by 28 states. Only single blood samples were received for many of these, and the cause could not be determined. However, 45 cases imported into 14 states were confirmed as dengue fever. Eight cases of confirmed dengue were imported into southern states, where *Aedes aegypti* is found at least part of the year, and most of the rest were imported into eastern or midwestern states. No indigenous transmission of dengue was reported in the continental United States in 1982.

Six cases were confirmed virologically, and dengue types 1, 2, and 4 were isolated. Most confirmed cases were among persons returning from tropical areas of the Western Hemisphere including Puerto Rico, Jamaica, Surinam, Martinique, Dominican Republic, Guyana, Venezuela, El Salvador, and Mexico. Southeast Asia, the Pacific, India, and Africa accounted for smaller numbers of imported cases.

At least two patients with imported and confirmed dengue had associated hemorrhagic manifestations. One, a 54-year-old male with a travel history to Puerto Rico, was hospitalized with hematemesis, epistaxis, gingival bleeding, purpura, and a platelet count of 15,000. The second patient, a 41-year-old male returning from India, had petechiae and a platelet count of 20,000.

In the past decade, epidemic dengue activity has increased in most areas of the tropics. This reflects increased frequency of air travel, which provides the ideal mechanism for movement of dengue viruses between population centers of the world, and the lack of control of the vector mosquito, *Aedes aegypti*. Concurrent with the increased epidemic activity in the tropics has been an increase in imported dengue into the United States. Since 1977, a total of 855 suspected cases of dengue have been reported from most of the 50 states.

LEAD POISONING – Number of children screened and found to have lead toxicity in childhood lead-base paint poisoning prevention programs, United States, Calendar years 1972-1982

Calendar year	Estimated U.S. population ages 1-5	Number of reporting programs	Children				
			Screened		With lead toxicity[1]		Identified with iron deficiency
			Number	Rate/100,000	Number	Percentage of number screened	
1972	17,161,000	37	119,960	699	9,044	7.5	NA
1973	16,999,000	42	296,879	1,746	19,059	6.4	NA
1974	16,690,000	77	449,318	2,692	24,443	5.4	NA
1975	16,294,000	77	421,338	2,586	30,343	7.2	4,062
1976	15,881,000	66	406,413	2,559	33,043	8.1	10,103
1977	15,339,000	65	381,201	2,485	28,072	7.4	15,896
1978	15,236,000	64	410,211	2,692	26,734	6.5	17,069
1979	15,361,000	70	477,646	3,109	32,362	6.8	20,449
1980	15,649,000	63	512,504	3,275	25,293	4.9	20,063
1981	16,344,000	62	511,041	3,127	18,272	3.6	23,335
1982[2]	16,939,000	42	260,841[2]	1,540	7,980	3.1	12,909
TOTAL			4,247,352		254,645		123,886

[1] Children identified with lead toxicity are placed in screening classifications II, III, and IV as follows:

Blood lead (µg/dl)	Erythrocyte protoporphyrin (µg/dl whole blood) 50-109	110-249	>250
30-49	II	III	III
50-69	III	III	IV
>70	**	IV	IV

**Combination of results not generally observed in practice.

[2] Data are provisional 4/5/83. Numbers are not representative of lead screening activities in 1982 due to changes in program funding.

As of October 1, 1981, the funding for the CDC Childhood Lead-Base Paint Poisoning Prevention Program was discontinued. States and local programs could elect to continue their screening activities through funding by the Maternal and Child Health (MCH) block grants. With this change, local programs only reported lead-screening information to CDC on a voluntary basis, and for that reason the statistics are not representative of lead screening activities in 1982. The number of reporting programs declined sharply from 60 in September 1981 to 21 in September 1982.

Until more accurate statistics can be obtained on childhood lead screening and lead toxicity, CDC will no longer continue reporting childhood lead poisoning in this format.

LEAD POISONING — Results of screening in childhood lead-base paint poisoning control programs, United States, October 1981 - September 1982

Programs	Number of children				
		With lead toxicity[1]			
	Screened	Total	Class II	Classes III & IV	Identified with iron deficiency
United States	**341,867**	**10,500**	**7,550**	**2,950**	**16,841**
HHS REGION I	**25,238**	**814**	**585**	**229**	**822**
Bridgeport, Conn	1,149	43	35	8	53
Waterbury, Conn	1,475	22	19	3	123
Augusta (State of Maine)	1,884	10	8	2	18
Boston, Mass	9,793	268	193	75	500
Lawrence, Mass	5,833	357	266	91	85
Worcester, Mass	1,308	23	16	7	4
Rhode Island State	3,796	91	48	43	39
HHS REGION II	**152,514**	**6,151**	**4,508**	**1,643**	**10,743**
Atlantic City, N J	781	32	16	16	1
Camden, N J	2,823	65	45	20	90
East Orange, N J	1,913	64	52	12	167
Elizabeth, N J	2,369	65	47	18	137
Jersey City, N J	2,841	179	101	78	85
Long Branch, N J	611	2	2	—	15
Newark, N J	1,608	215	158	57	85
Paterson, N J	3,815	202	112	90	426
Plainfield, N J	3,386	89	66	23	160
Erie Co., N Y	3,648	226	175	51	25
Monroe Co., N Y	5,522	264	193	71	337
New York City	112,335[2]	4,496[2]	3,363	1,133	8,698
Onondaga Co., N Y	7,792	200	143	57	353
Westchester Co., N Y	3,070	52	35	17	164
HHS REGION III	**32,767**	**598**	**431**	**167**	**1,414**
Delaware State	5,499	134	100	34	180
Washington, D C	14,003	146	104	42	834
Baltimore, Md	5,165	151	110	41	120
Chester, Pa	1,089	19	14	5	16
Philadelphia, Pa	1,287	82	55	27	4
Wilkes-Barre, Pa	399	12	8	4	24
York, Pa	139	—	—	—	11
Lynchburg, Va	410	5	2	3	6
Newport News, Va	2,455	18	13	5	177
Norfolk, Va	972	8	6	2	21
Portsmouth, Va	598	12	9	3	13
Richmond, Va	751	11	10	1	8
HHS REGION IV	**30,440**	**284**	**198**	**86**	**263**
Savannah-Chatham Co., Ga	4,804	85	50	35	71
Louisville, Ky	6,239	106	77	29	179
Cabarrus Co., N C	1,522	2	2	—	13
South Carolina State	17,875	91	69	22	—
HHS REGION V	**38,883**	**1,883**	**1,307**	**576**	**1,374**
Chicago, Ill	10,232	544	332	212	99
Kankakee, Ill	408	23	17	6	65
Madison Co., Ill	1,551	30	27	3	4
Rockford, Ill	2,770	17	7	10	63
Waukegan-Lake Co., Ill	547	3	2	1	13
Illinois (Other local programs)	1,265	14	11	3	1
Grand Rapids, Mich	2,196	29	20	9	66
Wayne Co., Mich	1,902	72	40	32	55
Akron, Ohio	580	14	13	1	30
Cleveland, Ohio	13,168	978	739	239	807
Beloit, Wis	225	10	8	2	9
Milwaukee, Wis	4,039	149	91	58	162
HHS REGION VI	**53,233**	**360**	**256**	**104**	**1,137**
Arkansas State	1,986	49	29	20	61
Louisiana State	37,126	123	86	37	669
New Orleans, La	8,584	152	116	36	313
Houston, Texas	5,537	36	25	11	94
HHS REGION VII	**8,792**	**410**	**265**	**145**	**1,088**
Cedar Rapids-Linn Co., Iowa	1,785	9	4	5	30
Davenport-Scott Co., Iowa	1,907	25	17	8	41
St. Louis, Mo	2,661	314	195	119	89
Springfield, Mo	1,207	38	32	6	900
Omaha-Douglas Co., Nebr	1,232	24	17	7	28

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[1] Screening Class II and Classes III & IV defined in CDC Statement, "Preventing Lead Poisoning in Young Children," April 1978

[2] Estimated

NUTRITION — Anthropometric nutrition indices, by age and ethnic group[1], CDC Coordinated Nutrition Surveillance System, 1982

Age group	Number examined	Height-for-age	Weight-for height	
		< 5th percentile	< 5th percentile	≥95th percentile
0-11 Months				
White	68,413	6.8	3.9	5.8
Black	21,672	8.7	4.5	8.8
Hispanic	10,361	6.5	4.1	6.2
American Indian	2,321	6.7	3.4	7.4
Asian	5,971	6.3	3.8	4.4
12-23 Months				
White	21,970	11.1	4.4	9.5
Black	7,444	10.2	5.0	10.8
Hispanic	2,341	13.5	4.7	11.2
American Indian	538	12.3	4.6	13.9
Asian	2,404	15.2	6.0	9.6
2-5 Years				
White	52,286	9.6	2.5	4.3
Black	19,450	6.3	3.3	5.7
Hispanic	4,829	12.6	2.9	6.8
American Indian	1,103	11.9	1.7	9.1
Asian	4,838	15.1	4.3	4.3
6-9 Years				
White	9,393	7.0	1.8	7.4
Black	7,701	3.7	3.8	5.2
Hispanic	555	10.6	2.3	11.7
American Indian	99	6.1	1.0	3.0
Asian	78	43.6	6.4	2.6

[1] Data for Asians include an unknown number of recent Southeast Asian refugees.

Note: Numbers of children examined do not total 270,127 because of unknown or missing data for some variables.

The Nutrition Surveillance System, coordinated by the Centers for Disease Control, uses nutrition-related data collected by local health departments as part of the routine delivery of child health services. During 1982, data were submitted for 270,127 children ranging in age from birth through 9 years. These data represent the results of examining new patients at 1,222 clinics in 24 states in 1982. The data include records that were received by the Division of Nutrition through April 1983. Data on weight, age, and height or length are converted to percentiles for height-for-age and weight-for-height, using growth curves for children from birth to 18 years of age published by the National Center for Health Statistics.

There is no consensus on which levels of hemoglobin and/or hematocrit should be used to define anemia. Most clinics that provide data to the Nutrition Surveillance System use cut-off levels adjusted to reflect the increases in hemoglobin that occur with age. At present, these values are 10.0 g/dl for children 6-23 months old, 11.0 g/dl for 2- to 5-year-olds, and 12.0 g/dl for 6- to 9-year-olds. The World Health Organization and others have suggested the use of 11.0 g/dl for the age range 6 months-5 years. In view of the lack of consensus in regard to which levels of hemoglobin are indicative of anemia, the tables on the following page list, by age and ethnic group, four alternative cut-off points for hemoglobin and three selected cut-off points for hematocrit values.

Preliminary age- and sex-specific percentile curves were developed at CDC from the First National Health and Nutrition Evaluation Survey (NHANES I) hematology data. The prevalence of values below the 5th percentile curve is included in the tables to provide an additional reference point for the evaluation of hematology data.

NUTRITION — Prevalence (%) of persons examined with hemoglobin values below selected cut-off points, by age and ethnic group[1], CDC Coordinated Nutrition Surveillance System, 1982

Age group	Number examined	5th percentile	Hemoglobin (g/d1)			
			10.0	11.0	11.5	12.0
6-11 Months						
White	2,708	2.4	5.6	22.9	39.4	56.9
Black	1,021	1.9	4.2	20.9	38.5	55.6
Hispanic	710	0.8	2.4	16.8	32.3	52.7
American Indian	67	—	1.5	7.5	22.4	44.8
Asian	721	3.3	9.8	32.3	52.7	69.9
12-23 Months						
White	4,516	4.8	6.4	21.3	36.2	51.6
Black	1,557	4.5	6.0	20.7	35.4	55.6
Hispanic	662	4.1	5.1	17.5	29.9	47.3
American Indian	78	3.8	2.6	19.2	24.4	41.0
Asian	1,737	5.2	8.5	25.9	43.6	61.9
2-5 Years						
White	9,275	5.4	1.4	10.8	20.8	33.8
Black	3,649	6.7	1.4	11.2	23.3	40.9
Hispanic	1,585	2.6	1.2	5.0	10.8	21.7
American Indian	199	2.5	—	4.5	10.1	17.1
Asian	3,626	6.6	2.4	16.9	28.2	44.3
6-9 Years						
White	899	5.2	—	1.1	4.1	8.2
Black	1,186	11.0	—	2.3	9.2	20.4
Hispanic	304	0.3	—	—	—	2.0
American Indian	13	*	*	*	*	*
Asian	55	5.5	—	—	5.5	9.1

[1] Data for Asians include an unknown number of recent Southeast Asian refugees

*Insufficient data

NUTRITION — Prevalence (%) of persons examined with hematocrit values below selected cut-off points, by age and ethnic group[1], CDC Coordinated Nutrition Surveillance System, 1982

Age group	Number examined	5th percentile	Hematocrit (%)		
			31	34	37
6-11 Months					
White	11,375	6.8	6.0	31.0	73.8
Black	4,323	4.6	3.9	26.6	72.8
Hispanic	1,045	8.1	6.5	29.9	73.7
American Indian	200	3.5	3.5	25.4	66.9
Asian	432	13.4	12.7	35.6	73.4
12-23 Months					
White	16,962	6.3	4.0	22.7	64.1
Black	6,010	5.0	3.6	21.0	62.7
Hispanic	1,710	7.3	4.6	19.9	62.9
American Indian	421	8.1	4.8	21.4	62.2
Asian	719	13.6	11.4	30.0	65.9
2-5 Years					
White	40,216	6.7	1.6	13.7	53.0
Black	16,082	7.6	1.6	14.1	53.9
Hispanic	3,453	8.8	2.3	14.6	50.0
American Indian	852	6.5	2.0	13.0	48.0
Asian	1,310	16.9	5.6	27.5	59.2
6-9 Years					
White	9,168	4.2	—	2.0	21.4
Black	7,578	7.9	—	3.6	30.8
Hispanic	427	2.3	—	1.2	15.5
American Indian	98	5.1	—	1.0	19.4
Asian	26	*	*	*	*

[1] Data for Asians include an unknown number of recent Southeast Asian refugees

*Insufficient data

Mean* blood lead levels for U.S. workers 18-74 years of age, by sex and potential exposure to metallic lead, 1976-1980

Observed potential workplace exposure to metallic lead	Sex	Average[1] blood lead level, μg/dL (SE)	Percentage[1] workers with blood lead levels > 30 μg/dL (SE)
Present	Male	17.9 (0.34)	5.8 (0.66)
	Female	12.3 (0.36)	1.1 (0.68)
Absent	Male	15.5 (0.36)	1.2 (0.51)
	Female	11.5 (0.28)	(-)[2]

*Data sources: The National Center for Health Statistics' *National Health and Nutrition Examination Survey (1976-1980)*. The NIOSH National Occupational Hazard Survey was used to identify workers in types of workplaces with observed potential exposure to lead.

[1] The estimated standard errors (μg/dL) of the estimates are in parentheses next to the National estimated averages.

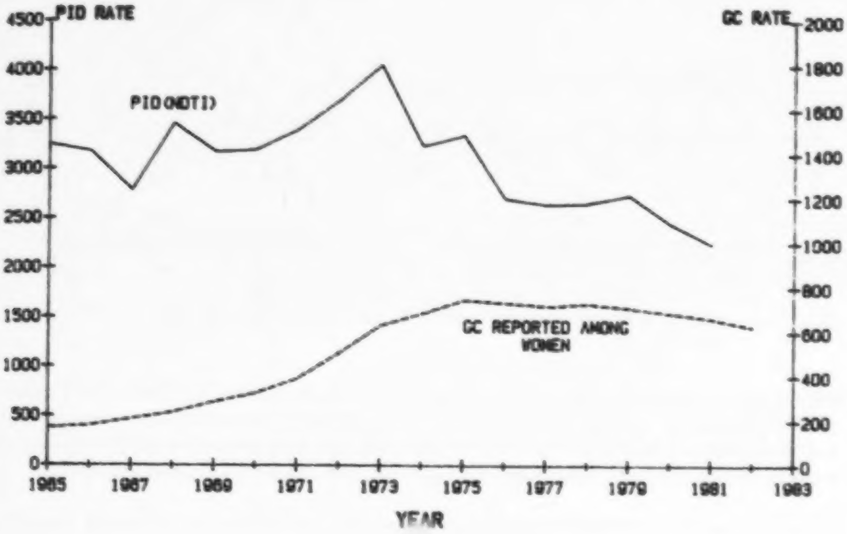
[2] This percentage and its standard error are estimated to be zero. The true percentage is probably greater than zero.

Data collected during NHANES II indicate that blood lead levels were significantly higher among adults working in occupations with potential exposure to lead than in occupations without such potential exposures. Cigarette smokers had consistently higher blood lead determinations than nonsmokers, and men had higher levels than women.

The NHANES II blood lead determinations were compared with data previously collected during the National Occupational Hazard Survey (NOHS), conducted in the period 1972-1974. NOHS collected information on potential exposures of workers to chemical and physical agents in a probability sample survey of approximately 5,000 workplaces across the United States. These data indicated occupations associated with potential exposure to lead in the workplace. The results of blood lead determinations among workers, ages 18-74 years, surveyed by NHANES II were divided into two groups: those for persons working in settings previously identified by NOHS as affording potential exposure to lead and those for persons working in settings without such potential exposure.

The data indicate that exposure in the workplace has had and may continue to have a significant impact on blood lead levels of adults in the United States. Although blood lead levels among workers in the lead industries have declined in recent years, they are still significantly higher than among lead workers in the United Kingdom, Sweden, or Finland.

PELVIC INFLAMMATORY DISEASE (PID) — Total number of consultations for PID* and reported cases of gonorrhea† among women per 100,000 population, United States, 1965-1982



*PID rates calculated for women, 15-50 years of age, reported to the National Disease and Therapeutic Index (NDTI)

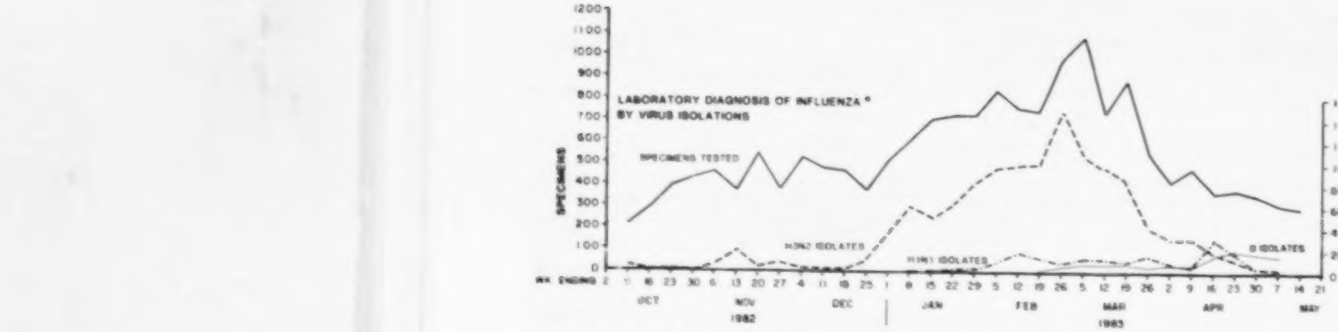
†Gonorrhea rates calculated for women, 15-49 years of age, reported by state health departments to the CDC Division of Venereal Disease Control.

Pelvic inflammatory disase (PID) is the most common serious complication of gonorrhea and is considered a major public health problem. It is estimated that about I million cases of PID (from all causes, including gonorrhea and *Chlamydia*) occur each year in the United States, and about 25% of the patients require hospitilization. Recurrences of PID are common, and all women who have had PID are at increased risk for infertility and ectopic pregnancy.

The trend of ambulatory PID was similar to that of gonorrhea. Data from the National Disease and Therapeutic Index (NDTI) show an increase in total visits for PID to office-based private physicians between 1965 and 1973, just as gonorrhea cases showed their greatest increase. Between 1973 and 1981, PID visit rates generally decreased. Data from the National Center for Health Statistics' *National Hospital Discharge Survey* show that PID hospitilization rates among women 15 to 44 years of age increased from 1973 to 1977, though remained stable from 1977 to 1981. These decreases may be related to gonorrhea control program efforts.

PNEUMONIA-INFLUENZA

Laboratory surveillance of influenza virus,
United States, 1982-1983



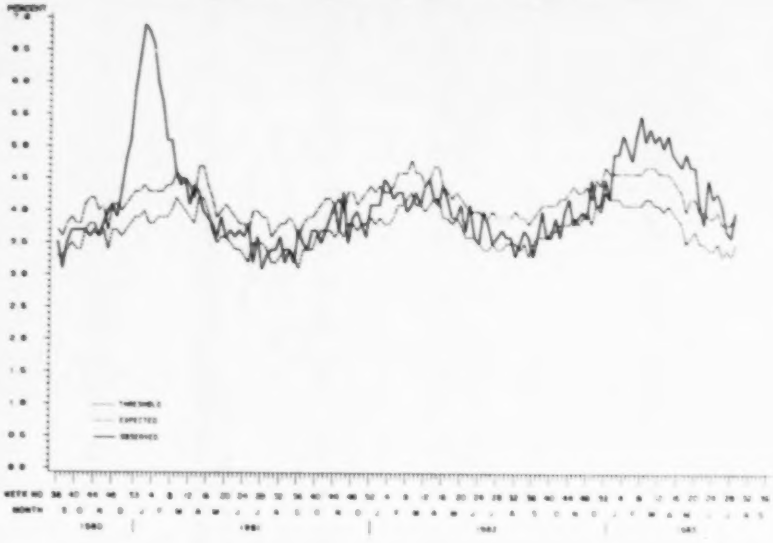
*Reported to CDC by WHO collaborating laboratories (including military sources).

Influenza virus types A(H3N2), A(H1N1), and B were isolated during the 1982-1983 season. A(H3N2) isolates predominated; the peak of their activity for the nation was in late February and early March. A(H1N1) and type B isolates were detected later in the season in many regions of the country, each finally representing about 10% of the total isolates reported.

Influenza virus type A(H3N2) infection was associated with reports of outbreaks among all age groups, including many nursing home populations, with clinical attack rates up to approximately 60%. Influenza A(H1N1) infections were again recognized predominantly among children and young adults and were associated with occasional school outbreaks. Influenza type B virus, which caused several documented outbreaks in schools, was also associated with occasional outbreaks of influenza in nursing homes during the season and was responsible for some late outbreaks in May.

Twelve states reported widespread influenza activity in the period of viral circulation in 1982-1983 compared with the four and 32 states that reported widespread activity during the 1981-1982 and the 1980-1981 seasons, respectively.

PNEUMONIA-INFLUENZA — Percentage of deaths attributed to pneumonia and influenza in 121 cities, United States, 1980-1983



Pneumonia and influenza (P&I) mortality from 121 cities exceeded the calculated epidemic threshold level from January into April 1983, coinciding with influenza virus isolates, reports of regional or widespread influenza morbidity, and national estimates of the excess number of deaths from all causes. However, P&I mortality remained above the threshold through the week of July 9, in the absence of corroborating influenza data. The elevations in May-July were due almost exclusively to excess pneumonia mortality among persons ≥ 65 years of age, following a rising trend in pneumonia mortality in this age group seen over the last several years.

REFUGEES — Indochinese refugee arrivals in the United States, by country of birth and area of initial destination, 1982

Area	Cambodia	China	Laos	Vietnam	Other[1]	Total 1982	Total 1975-1982[2]
Ala.	122	—	8	201	37	368	2,204
Alaska	—	—	1	20	—	21	298
Ariz.	168	—	27	208	36	439	3,817
Ark.	42	1	17	200	11	271	2,900
Calif.	2,303	95	1,554	11,719	779	16,450	227,655
Colo.	212	2	84	550	55	903	10,568
Conn.	158	—	44	351	21	574	6,309
Del.	2	—	6	10	1	19	305
D.C.	295	1	113	491	75	975	1,137
Fla.	357	4	78	959	84	1,482	10,525
Ga.	315	2	136	881	93	1,427	5,891
Hawaii	30	6	89	437	48	610	5,711
Idaho	45	—	28	133	13	219	1,291
Ill.	570	10	399	1,123	178	2,280	21,955
Ind.	84	1	50	247	26	408	4,137
Iowa	87	—	122	299	32	540	8,168
Kans.	103	1	86	874	50	1,114	9,203
Ky.	182	2	52	322	36	594	2,612
La.	116	2	100	1,009	55	1,282	15,334
Maine	104	—	9	50	20	183	1,134
Md.	123	—	9	317	20	469	7,632
Mass.	812	9	205	1,102	186	2,314	12,247
Mich.	120	4	82	486	36	728	9,586
Minn.	504	4	362	815	110	1,795	21,459
Miss.	4	—	3	210	3	220	1,413
Mo.	183	5	133	555	57	933	5,441
Mont.	4	—	38	21	6	69	997
Nebr.	—	—	—	—	—	—	2,384
Nev.	83	2	18	96	12	211	1,826
N.H.	67	—	6	33	16	122	430
N.J.	37	—	35	614	20	706	5,316
N. Mex.	41	3	89	224	23	380	2,746
N.Y.	836	14	183	1,890	190	3,113	18,705
N.C.	94	1	59	355	29	538	3,998
N. Dak.	83	—	10	36	18	147	695
Ohio	471	—	169	439	103	1,182	8,920
Okla.	233	3	94	602	55	987	9,279
Oreg.	307	2	325	844	128	1,606	17,987
Pa.	738	16	127	1,287	138	2,306	23,383
R.I.	153	1	105	65	46	370	5,998
S.C.	60	—	40	180	16	296	2,145
S. Dak.	33	—	12	67	11	123	1,000
Tenn.	186	2	173	277	66	704	4,267
Texas	1,204	10	526	4,523	358	6,621	51,428
Utah	194	4	167	204	72	641	7,322
Vt.	25	1	6	10	1	43	398
Va.	462	1	79	1,019	103	1,664	19,794
Wash.	604	2	587	1,385	233	2,811	30,191
W. Va.	6	1	26	42	7	82	447
Wis.	39	3	242	254	37	575	7,957
Wyo.	1	—	—	15	—	16	266
Guam	—	—	—	—	—	—	222
P.R.	—	—	—	—	—	—	9
V.I.	—	—	—	—	—	—	—
Total	**13,002**	**215**	**6,913**	**38,051**	**3,750**	**61,931**	**626,876**

[1] Primarily children born in parent's country of first asylum.
[2] Adjusted for secondary migration through September 30, 1982.

From April 1975 through June 1979, 212,181 Indochinese refugees were resettled in the United States, an average of 4,160 per month. In the period July 1979-September 1981, the quota for Indochinese refugee resettlement to the United States was 14,000 per month. During that time, 334,784 Indochinese refugees were resettled at an average of 12,399 per month. In October 1981, an Indochinese refugee resettlement ceiling of 100,000 for the period October 1981-September 1982 was established. During that time, 73,834 Indochinese refugees resettled in the United States. The Indochinese refugee resettlement ceiling for the period October 1982-September 1983 was established at 64,000.

REFUGEES — Refugee arrivals to the United States, October 1, 1975 - September 30, 1982

Area	Total FY* 1975 - FY 1982	FY 1982	FY 1981	FY 1980	FY 1979	FY 1978	FY 1977	FY 1976	FY 1975
Asia	622,555	73,522	131,139	163,799	76,521	20,574	7,000	15,000	135,000
Soviet Union	101,633	2,756	13,444	28,444	24,449	10,688	8,191	7,460	6,211
Eastern Europe	33,605	10,780	6,704	5,025	3,393	2,245	1,755	1,756	1,947
Latin America	28,281	602	2,017	6,662	7,000	3,000	3,000	3,000	3,000
Near East	12,429	5,369	3,829	2,231	-	-	-	-	-
Africa	6,400	3,326	2,119	955	-	-	-	-	-
Total	804,903	97,355	159,252	207,116	111,363	36,507	19,946	27,206	146,158

*Fiscal year

REFUGEES — Indochinese refugee arrivals, by class of tuberculosis (TB), state, and initial evaluation in the United States, 1982

State	Class A (active or suspected active) TB						Class B (suspected not active) TB					
		Initial evaluation in the U.S. (presumptive diagnosis)						Initial evaluation in the U.S. (presumptive diagnosis)				
	Total no. referred to health depts.	Active	Activity undetermined	Not active	Not TB	Follow-up report not received by CDC	Total no. referred to health depts.	Active	Activity undetermined	Not active	Not TB	Follow-up report not received by CDC
Ala	7	1	1	3	—	2	10	—	1	1	3	5
Alaska	—	—	—	—	—	—	2	—	—	1	—	1
Ariz	12	2	3	2	1	4	19	1	3	3	—	12
Ark	8	1	1	5	1	—	17	1	1	2	9	4
Calif	348	53	113	114	31	37	880	20	137	342	173	208
Colo	15	6	3	5	1	—	41	1	4	18	11	7
Conn	9	4	3	2	—	—	19	2	3	6	1	7
Del	—	—	—	—	—	—	—	—	—	—	—	—
D C	16	2	7	3	2	2	59	1	6	21	14	17
Fla	26	7	9	6	3	1	84	—	1	22	16	45
Ga	16	—	2	7	5	2	72	1	1	13	9	48
Hawaii	19	6	10	3	—	—	26	1	8	9	1	7
Idaho	2	—	1	—	—	1	13	—	2	1	5	5
Ill	35	4	14	7	7	3	95	2	12	25	26	30
Ind	9	—	—	1	—	8	21	—	1	1	3	16
Iowa	10	4	—	5	1	—	33	2	5	14	11	1
Kans	10	4	—	4	1	1	42	3	1	15	11	12
Ky	5	1	1	—	3	—	28	1	3	6	7	11
La	21	4	2	2	2	11	54	1	4	3	6	40
Maine	4	1	—	3	—	—	4	—	—	1	—	3
Md	7	2	2	1	2	—	31	—	9	9	10	3
Mass	38	13	12	8	2	3	123	4	13	37	22	47
Mich	8	2	4	2	—	—	45	4	4	12	13	12
Minn	35	4	13	5	13	—	90	3	19	23	32	13
Miss	4	1	1	—	2	—	12	—	—	6	3	3
Mo	15	1	5	4	3	2	51	2	8	17	10	14
Mont	1	—	—	1	—	—	1	—	—	—	—	1
Nebr	—	—	—	—	—	—	—	—	—	—	—	—
Nev	2	1	1	—	—	—	10	—	1	4	1	4
N H	—	—	—	—	—	—	4	—	—	1	1	2
N J	17	4	1	10	—	2	34	—	1	12	10	11

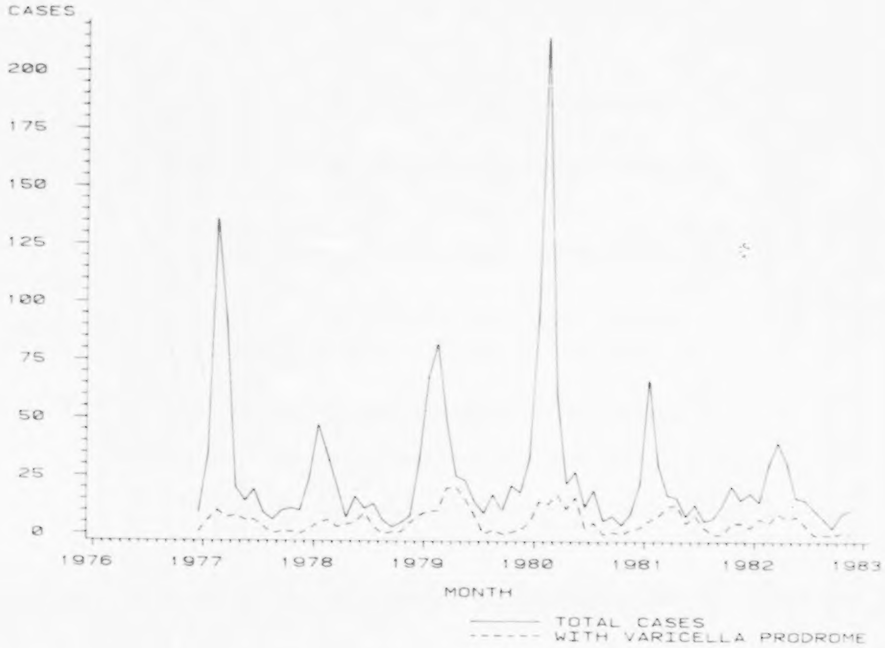
REFUGEES — Indochinese refugee arrivals, by class of tuberculosis (TB), state, and initial evaluation in the United States, 1982 (continued)

State	Class A (active or suspected active) TB						Class B (suspected not active) TB					
	Total no. referred to health depts.	Initial evaluation in the U.S. (presumptive diagnosis)					Total no. referred to health depts.	Initial evaluation in the U.S. (presumptive diagnosis)				
		Active	Activity undetermined	Not active	Not TB	Follow-up report not received by CDC		Active	Activity undetermined	Not active	Not TB	Follow-up report not received by CDC
N. Mex.	7	1	2	3	1	—	21	2	11	3	3	2
N.Y.	51	7	9	18	7	10	143	3	14	51	14	61
N.C.	10	1	—	5	2	2	25	3	1	8	4	9
N. Dak.	—	—	—	—	—	—	5	—	—	4	—	1
Ohio	15	4	1	5	2	3	86	4	4	17	21	20
Okla.	18	1	4	9	1	3	59	3	4	14	17	21
Oreg.	37	11	9	10	6	1	64	1	16	29	13	5
Pa.	43	6	4	20	10	3	139	6	9	38	54	32
R.I.	3	—	2	1	—	—	14	—	—	3	—	11
S.C.	2	—	1	1	—	—	15	—	—	8	5	2
S. Dak.	1	—	1	—	—	—	6	1	—	3	1	1
Tenn.	9	—	3	2	4	—	35	2	4	9	15	5
Texas	123	21	51	23	15	13	331	9	60	82	102	78
Utah	11	2	4	2	3	—	41	1	9	16	4	11
Vt.	—	—	—	—	—	—	2	—	—	—	—	2
Va.	49	6	8	15	7	13	100	4	8	33	22	33
Wash.	55	11	17	16	11	—	137	6	13	55	47	16
W. Va.	—	—	—	—	—	—	5	—	—	2	1	2
Wis.	18	4	3	5	5	1	29	—	1	5	7	16
Wyo.	—	—	—	—	—	—	1	—	—	—	—	1
Total[1]	1,151	203	328	338	154	128	3,158	95	402	1,005	738	918

[1] Reported through May 1983.

Indochinese refugees are medically screened in Southeast Asia before traveling to the United States and other countries. Upon arrival at U.S. ports of entry, persons with suspected cases of tuberculosis are referred to appropriate state and local health departments, who in turn notify CDC of the case disposition. Class A tuberculosis (suspected active tuberculosis) referrals totalled 826 for 1979, 5,220 for 1980, 2,389 for 1981, and 1,151 for 1982. Class B tuberculosis (not considered active) referrals totalled 2,243 for 1979, 3,730 for 1980, 3,639 for 1981, and 3,158 for 1982.

REYE SYNDROME — Reported cases, by month of hospitalization, United States, December 1976-November 1982



The peak number of cases of Reye syndrome normally occurs in the winter months and coincides with the increase in cases of chickenpox (varicella) and in influenza isolates identified by collaborating laboratories in the United States. In general, the highest number of Reye syndrome cases are reported during years of predominantly influenza B activity. In the 1981-1982 season, however, the incidence of Reye syndrome was relatively low, despite the fact that influenza B was the predominant strain. This relatively low incidence probably reflected, at least in part, the fact that influenza B activity was spotty and relatively mild during the 1981-1982 season.

BEHAVIORAL RISK FACTORS

The Surgeon General's *Report on Health Promotion and Disease Prevention* emphasized that simple measures to enhance the prospects of good health are within the practical grasp of most Americans. A variety of behavioral risk factors, e.g., alcohol misuse, cigarette smoking, obesity, sedentary lifestyle, lack of seat-belt use, and uncontrolled hypertension, influence individual health.

In 1982, 28 states and the District of Columbia conducted random-digit dialing telephone surveys of their adult populations to determine the prevalence of selected behavioral risk factors. The data from 23 of these states and the District of Columbia are presented in tables on the following pages. Arkansas conducted a similar survey early in 1983, and these data are also included.

Preliminary analysis of data on adults 18 years and over indicates the following:

1. Obesity was more prevalent in the middle adult ages (35-54), and was reported somewhat more often by men.
2. Men were more likely than women to have a sedentary lifestyle; for both sexes, sedentary living increased with age.
3. Uncontrolled hypertension increased with age for women more frequently than for men.
4. Cigarette smoking was more prevalent among men than women and was more prevalent for the middle ages (35-54 years).
5. At all ages, men, more frequently than women, reported misuse of alcohol.
6. Acute, heavy drinking was higher for young adults (both male and female) ages 18-34 than for older adults; rates for young males were higher than those for young females.
7. Young men were more likely than older adults to drive while intoxicated.
8. Failure to use seat belts was widespread for all ages and both sexes.

All the states used standard questions except where noted. However, the definitions used in certain questions and the limitations imposed by the small number of individuals in some age and sex subgroups should be considered when making comparisons.

Prevalence[1] of obesity and sedentary lifestyle 24 states and the District of Columbia, by age group and sex, 1982

Risk factor, by state	Age group (years), by sex								Total respondents	
	18-34		35-54		≥55		All ages			
	M	F	M	F	M	F	M	F	Number	Rate
1. **Obesity**[2]										
Alabama	14.4	12.7	33.2	42.1	21.4	25.3	22.0	25.7	696	23.9
Alaska	11.7	10.3	28.1	27.4	34.0	39.0	20.3	19.7	845	20.0
Arizona	12.6	7.2	22.4	20.0	26.9	29.1	18.4	15.3	1535	16.8
Arkansas	29.8	13.6	36.4	33.4	25.1	26.8	29.5	25.8	500	27.5
California	13.3	4.9	25.0	18.7	17.5	22.2	18.2	13.7	1516	15.9
Delaware	11.3	13.8	26.1	21.4	30.2	24.9	21.0	19.6	485	20.3
D.C.	10.9	10.8	24.7	34.4	19.4	46.4	17.4	28.9	483	23.7
Florida	17.4	14.0	28.3	37.5	21.7	39.6	22.4	30.5	471	26.2
Indiana	16.0	12.4	30.7	33.0	24.0	36.6	22.9	26.4	479	24.6
Iowa	11.0	10.7	28.2	24.1	31.0	31.1	19.4	19.1	675	19.3
Kansas	12.2	15.7	28.9	28.4	21.6	24.0	19.8	22.5	481	21.2
Kentucky	19.0	14.7	31.3	31.2	26.0	31.7	24.8	25.0	456	24.9
Michigan	16.4	14.0	28.3	34.7	28.7	33.3	23.6	25.9	1448	24.8
Montana	8.0	9.2	30.1	17.7	23.4	24.6	19.1	16.7	500	17.9
Nebraska	15.9	18.2	32.4	26.8	23.0	24.7	22.6	22.7	481	22.7
New Hampshire	14.2	12.7	38.6	20.2	30.5	31.1	27.1	20.4	482	23.7
New Jersey	17.5	8.7	27.6	32.7	31.2	31.6	24.7	22.6	973	23.6
New Mexico	13.1	13.8	32.4	20.9	29.5	25.0	22.5	19.0	960	20.7
Ohio	17.4	11.0	41.1	28.4	25.0	33.0	27.6	22.4	558	24.8
North Carolina	16.8	9.0	31.6	29.6	37.2	41.7	26.6	26.1	462	26.3
Tennessee	20.3	13.6	33.2	24.0	19.2	32.3	23.7	22.6	797	23.1
Texas	17.7	11.7	30.3	25.8	22.2	26.9	22.7	20.1	1840	21.4
Virginia	15.5	14.8	25.7	14.0	36.2	27.4	24.9	18.3	499	21.5
West Virginia	19.5	20.9	21.1	17.8	33.1	33.3	23.8	24.4	476	24.1
Wyoming	15.3	10.7	21.5	23.9	16.2	18.0	17.6	16.6	501	17.1
2. **Sedentary lifestyle**[3]										
Alabama	5.2	9.2	6.7	10.4	28.8	19.2	11.8	12.8	696	12.3
Alaska	2.8	10.5	20.5	11.1	11.8	22.8	10.2	12.3	845	11.2
Arizona	4.5	8.4	13.7	9.2	16.0	10.3	9.6	8.0	1535	8.8
Arkansas	3.9	9.0	9.8	8.1	26.0	20.5	13.9	13.3	500	13.6
California	7.3	10.8	20.9	10.0	19.1	15.1	14.3	11.4	1516	12.8
Delaware	11.3	9.4	18.7	21.7	8.2	14.6	12.9	15.6	485	14.2
D.C.	7.1	9.7	13.8	21.2	37.5	27.9	15.7	18.7	483	17.4
Florida	10.1	6.2	17.2	10.8	17.9	14.6	15.1	10.7	471	13.1
Indiana	6.4	6.5	17.5	7.0	27.6	15.8	15.7	9.5	479	12.7
Iowa	2.3	4.2	7.6	5.6	4.8	12.6	4.3	6.2	675	5.3
Kansas	3.5	3.9	14.5	11.9	10.8	15.2	8.8	10.2	481	9.5
Kentucky	10.2	7.9	8.7	13.1	30.0	15.8	15.2	11.9	456	13.5
Michigan	6.2	7.1	16.5	9.8	18.2	16.9	12.8	10.6	1448	11.6
Montana	5.8	9.6	1.9	6.5	18.1	19.0	8.1	11.3	500	9.7
Nebraska	5.0	10.3	16.6	13.0	23.0	8.2	13.1	10.6	481	11.8
New Hampshire	9.7	7.7	13.8	7.8	9.9	15.0	11.2	9.6	482	10.4
New Jersey	11.3	10.0	22.9	16.5	25.9	23.5	19.2	15.8	973	17.4
New Mexico	5.0	10.7	21.2	9.2	23.7	16.5	14.2	11.8	960	13.0
Ohio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
North Carolina	7.8	7.8	11.4	19.9	19.7	15.9	12.1	14.2	462	13.2
Tennessee	4.6	13.1	19.9	11.6	13.2	13.1	11.9	12.6	797	12.3
Texas	4.5	7.3	16.6	12.9	15.8	17.8	10.8	11.7	1840	11.3
Virginia	5.0	9.4	18.9	15.2	19.3	14.6	13.9	13.2	499	13.5
West Virginia	5.2	7.6	16.1	4.7	30.3	10.1	15.6	7.6	476	11.4
Wyoming	8.3	4.5	11.1	13.4	14.9	15.0	10.3	9.7	501	10.0

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1 Rate per 100 respondents.

2 120% of ideal weight (ideal weight defined as the mid-value of the medium-frame person on the 1959 Metropolitan Life Insurance Company height/weight tables).

3 Combined low level of activity from exercise, work, and recreation.

Prevalence[1] of uncontrolled hypertension and cigarette smoking, 24 states and the District of Columbia, by age and sex, 1982

Risk factor, by state	Age group (years), by sex								Total respondents	
	18-34		35-54		≥55		All ages			
	M	F	M	F	M	F	M	F	Number	Rate
1. Uncontrolled hypertension[2]										
Alabama	2.9	0.4	6.5	10.4	13.4	6.2	6.8	5.3	696	6.0
Alaska	0.9	0.8	0.8	3.4	9.8	8.6	2.0	2.7	845	2.3
Arizona	1.9	1.3	4.1	2.1	6.0	8.0	3.3	2.7	1535	3.0
Arkansas	5.6	—	7.6	8.6	5.1	10.5	5.8	7.2	500	6.5
California	1.7	1.4	2.1	2.5	4.3	11.6	2.4	4.0	1516	3.2
Delaware	2.6	1.6	3.0	6.4	1.6	14.2	2.5	6.6	485	4.5
D.C.	3.9	0.6	5.4	4.8	6.9	17.9	5.0	6.8	483	6.0
Florida	1.3	—	8.3	4.2	3.7	6.3	4.4	3.6	471	4.0
Indiana	1.2	3.2	7.3	—	4.4	5.7	4.0	2.9	479	3.5
Iowa	1.6	0.3	2.9	3.9	1.1	3.0	1.9	2.1	675	2.0
Kansas	—	—	2.8	3.5	8.8	8.5	3.1	3.9	481	3.5
Kentucky	2.7	2.6	6.1	5.6	3.0	11.2	3.9	6.2	456	5.1
Michigan	1.6	2.4	6.4	5.0	8.3	11.3	4.9	5.6	1448	5.3
Montana	1.4	0.9	—	2.8	5.3	10.6	2.1	4.4	500	3.3
Nebraska	2.5	1.2	5.3	0.8	6.0	3.7	4.2	1.7	481	2.9
New Hampshire	1.9	—	6.9	2.7	6.9	6.7	5.0	2.8	482	3.9
New Jersey	1.6	—	0.4	7.7	7.6	7.7	2.8	4.5	973	3.7
New Mexico	0.6	1.6	3.0	1.7	7.0	5.6	2.9	2.7	960	2.8
Ohio	1.0	0.4	3.5	2.4	12.5	5.7	4.3	2.4	558	3.3
North Carolina	4.5	3.6	4.4	6.7	3.6	11.2	4.2	7.1	462	5.7
Tennessee	2.9	1.8	5.2	3.6	2.2	9.7	3.4	4.7	797	4.1
Texas	1.3	1.2	2.4	2.8	3.3	5.5	2.1	2.8	1840	2.4
Virginia	1.0	—	7.4	2.3	1.3	3.7	3.3	2.0	499	2.6
West Virginia	—	3.2	2.5	0.8	4.2	13.2	1.9	6.1	476	4.1
Wyoming	3.4	1.9	1.3	3.7	5.4	3.0	3.0	2.7	501	2.9
2. Cigarette smoking[3]										
Alabama	46.5	25.5	40.2	35.5	20.2	12.7	37.7	24.4	696	30.7
Alaska	34.2	37.2	45.0	32.8	33.5	27.0	37.9	34.4	845	36.3
Arizona	28.1	33.2	36.2	33.5	34.2	25.6	32.0	32.0	1535	32.0
Arkansas	23.6	20.0	41.8	38.2	26.7	20.5	29.0	26.5	500	27.7
California	33.9	27.5	31.7	30.7	25.1	17.3	31.5	26.6	1516	29.0
Delaware	32.1	32.7	32.1	28.0	27.8	23.2	30.9	28.5	485	29.7
D.C.	34.6	35.9	45.6	31.8	20.8	23.4	35.5	31.0	483	33.0
Florida	34.2	36.4	39.3	36.7	28.4	23.6	33.8	31.8	471	32.9
Indiana	46.2	29.2	40.9	38.8	21.3	15.0	37.8	28.1	479	33.2
Iowa	37.9	27.8	32.8	31.6	26.2	17.0	34.5	27.3	675	30.7
Kansas	21.2	15.0	41.0	29.5	22.5	14.1	27.7	19.5	481	23.4
Kentucky	48.1	33.0	62.6	25.5	34.0	18.5	48.8	26.2	456	37.1
Michigan	38.0	31.9	42.0	33.8	20.3	20.5	35.2	29.5	1448	32.2
Montana	30.4	22.0	30.1	27.4	29.8	15.1	30.1	21.9	500	25.9
Nebraska	25.1	25.5	39.1	28.4	16.2	10.0	26.9	22.2	481	24.5
New Hampshire	32.3	41.9	30.4	31.1	22.7	18.5	29.1	31.1	482	30.2
New Jersey	41.0	25.7	38.4	35.3	20.0	29.6	34.5	29.7	973	32.0
New Mexico	32.3	22.3	37.9	37.0	24.1	25.1	31.7	27.5	960	29.5
Ohio	32.4	23.7	[illegible]	38.4	30.2	16.5	37.8	27.2	558	32.2
North Carolina	40.8	31.1	[illegible]	32.0	44.8	23.8	45.7	29.0	462	37.1
Tennessee	42.3	30.5	[illegible]	32.2	24.8	17.5	37.4	27.2	797	32.0
Texas	34.7	27.6	41.9	30.8	22.5	20.0	34.4	26.9	1840	30.5
Virginia	37.1	36.9	35.4	32.2	28.6	22.3	34.1	30.7	499	32.4
West Virginia	31.4	31.0	45.3	33.3	34.5	17.0	36.6	26.7	476	31.4
Wyoming	34.3	23.2	50.2	34.3	28.4	18.0	38.7	25.7	501	32.3

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[1] Rate per 100 respondents.

[2] Person who has been told by medical professional he/she is hypertensive and who still has high blood pressure

[3] Current cigarette smoker

Prevalence[1] of acute heavy drinking and chronic heavy drinking, 24 states and the District of Columbia, by age and sex, 1982

Risk factor, by state	Age group (years), by sex								Total respondents	
	18-34		35-64		≥55		All ages			
	M	F	M	F	M	F	M	F	Number	Rate
1. **Acute heavy drinking**[2]										
Alabama	36.5	13.4	23.3	2.4	7.3	0.4	24.9	5.9	696	14.8
Alaska	38.9	14.7	24.9	9.4	11.8	12.0	30.5	12.6	845	22.1
Arizona	44.0	20.1	27.9	8.3	10.0	4.0	32.9	13.4	1535	22.9
Arkansas	26.6	8.3	12.0	1.0	1.3	0.9	13.3	2.8	500	7.7
California	47.4	17.9	31.0	14.2	13.8	2.8	35.2	13.3	1516	24.0
Delaware	46.5	25.6	28.1	13.8	15.5	5.2	32.5	15.9	485	24.3
D.C.	30.4	14.6	27.2	12.1	8.3	4.7	24.7	11.0	483	17.2
Florida	47.7	17.1	26.9	15.0	21.7	4.2	31.9	11.7	471	22.5
Indiana	49.1	15.1	27.8	8.3	21.3	2.7	34.8	9.1	479	22.5
Iowa	56.1	24.0	20.7	20.6	23.0	2.2	40.0	18.9	675	29.0
Kansas	36.2	20.3	15.7	9.8	7.8	2.1	22.6	11.0	481	16.6
Kentucky	38.0	15.2	18.3	5.6	4.0	—	22.3	7.5	456	14.7
Michigan	57.8	27.7	41.1	13.8	27.2	4.9	44.5	17.1	1448	30.2
Montana	65.2	25.2	32.0	9.8	20.2	3.4	42.4	13.4	500	27.6
Nebraska	45.5	24.8	26.0	15.3	14.5	2.7	31.7	15.8	481	23.5
New Hampshire	54.2	26.5	25.5	4.4	10.8	6.7	32.9	13.0	482	22.6
New Jersey	41.6	25.3	27.6	11.6	14.0	7.3	29.4	16.0	973	22.3
New Mexico	45.9	15.2	35.3	9.3	16.3	0.9	35.4	9.5	960	22.1
Ohio	52.3	19.5	26.4	4.7	10.4	2.1	34.3	10.2	558	21.5
North Carolina	32.9	18.5	27.2	1.3	7.2	4.6	24.2	8.6	462	16.1
Tennessee	32.2	7.2	22.5	2.0	6.1	0.4	21.4	3.4	797	11.9
Texas	47.6	19.7	35.0	9.1	10.8	4.2	35.7	12.4	1840	23.7
Virginia	38.3	22.9	23.8	5.3	9.3	3.3	25.1	10.4	499	17.5
West Virginia	31.0	14.6	16.1	3.9	7.7	1.9	19.9	7.0	476	13.0
Wyoming	52.8	26.1	34.9	14.7	17.6	2.0	41.0	17.2	501	29.4
2. **Chronic heavy drinking**[3]										
Alabama	7.0	1.9	8.8	0.9	10.4	—	8.4	1.0	696	4.5
Alaska	14.5	4.5	21.4	1.0	22.6	9.0	18.0	4.0	845	11.5
Arizona	15.1	2.7	15.6	3.1	17.5	5.6	15.6	3.4	1535	9.3
Arkansas	13.4	3.5	8.7	—	1.3	1.7	7.6	1.6	500	4.4
California	13.9	3.6	18.3	5.4	14.2	7.6	15.5	5.1	1516	10.2
Delaware	13.9	5.3	15.7	2.1	15.5	6.9	14.9	4.4	485	9.7
D.C.	9.3	6.6	26.4	7.3	8.3	1.6	15.0	5.4	483	9.7
Florida	18.1	5.4	22.1	9.2	23.0	6.9	21.1	7.1	471	14.6
Indiana	12.2	—	16.1	3.1	13.8	—	13.9	1.0	479	7.7
Iowa	16.9	6.2	8.6	4.6	13.9	—	13.9	4.5	675	9.0
Kansas	16.8	3.9	14.9	3.5	8.8	6.4	14.2	4.6	481	9.2
Kentucky	7.5	2.1	9.6	1.2	3.0	—	6.9	1.2	456	3.9
Michigan	12.2	3.4	12.4	2.2	12.3	4.4	12.3	3.3	1448	7.6
Montana	13.0	3.7	10.7	3.7	13.8	0.6	12.5	2.8	500	7.5
Nebraska	10.9	2.4	7.1	6.9	6.0	—	8.5	3.2	481	5.8
New Hampshire	31.0	3.3	15.9	8.7	16.7	8.2	21.9	6.6	482	14.0
New Jersey	16.6	4.8	13.3	6.6	7.1	4.8	12.9	5.3	973	8.9
New Mexico	8.9	1.1	17.1	2.6	12.6	1.6	12.1	1.7	960	6.7
Ohio	7.0	0.1	6.5	0.9	8.3	2.1	7.1	0.9	558	3.8
North Carolina	6.7	—	15.8	1.3	2.7	2.0	8.2	1.1	462	4.5
Tennessee	10.0	1.2	7.3	1.3	8.3	0.4	8.6	1.0	797	4.6
Texas	16.6	3.9	21.9	4.9	13.2	4.2	17.6	4.3	1840	10.7
Virginia	13.5	4.1	12.7	4.1	4.0	5.5	10.6	4.5	499	7.4
West Virginia	9.5	—	4.3	—	6.3	—	7.0	—	476	3.3
Wyoming	17.3	5.5	8.1	6.7	12.2	2.0	13.4	5.1	501	9.3

[1] Rate per 100 respondents.

[2] Person who has drunk five or more drinks per occasion at least once in past month.

[3] Person whose average total alcoholic beverage intake exceeded 56 drinks per month in the past year.

Prevalence[1] of drinking and driving and lack of seat-belt use, 24 states and the District of Columbia, by age and sex, 1982

Risk factor, by state	Age group (years), by sex								Total respondents	
	18-34		35-54		≥55		All ages			
	M	F	M	F	M	F	M	F	Number	Rate
1. Drinking & driving[2]										
Alabama	15.1	4.4	2.1	—	3.1	—	8.0	1.7	696	4.6
Alaska	9.8	3.3	4.1	1.2	—	—	6.5	2.1	845	4.5
Arizona	11.7	4.8	5.2	1.2	1.0	0.7	7.7	2.9	1535	5.2
Arkansas	8.5	—	3.3	—	—	—	4.0	—	500	1.9
California	14.9	5.3	9.9	3.7	1.4	—	10.6	3.6	1516	7.0
Delaware	18.5	7.6	1.3	2.1	3.3	—	9.0	3.6	485	6.3
D.C.	2.9	1.1	5.4	1.2	1.4	—	3.5	0.9	483	2.0
Florida	13.4	—	4.8	3.3	1.2	—	6.4	1.0	471	3.9
Indiana	12.2	3.3	5.8	3.1	—	—	6.9	2.2	479	4.7
Iowa	23.0	5.3	5.7	8.4	9.1	—	15.5	5.5	675	10.3
Kansas	20.9	7.2	6.4	2.1	—	—	11.0	3.2	481	7.0
Kentucky	5.4	4.2	2.6	—	1.0	—	3.3	1.6	456	2.4
Michigan	22.2	5.4	8.4	1.9	2.6	—	12.5	2.8	1448	7.5
Montana[3]	41.7	18.6	22.3	5.6	7.4	1.7	28.4	9.1	500	18.5
Nebraska	29.9	3.6	6.3	0.8	1.7	—	15.8	1.7	481	8.5
New Hampshire	17.4	9.9	4.1	—	2.0	—	8.7	3.6	482	6.1
New Jersey	15.6	8.1	5.5	1.1	3.0	1.2	8.7	4.0	973	6.2
New Mexico	12.2	2.4	3.0	1.6	0.5	—	6.7	1.5	960	4.0
Ohio[3]	44.4	16.1	22.3	4.7	12.5	—	29.8	8.3	558	18.4
North Carolina	10.6	10.1	7.9	—	—	—	6.9	3.6	462	5.2
Tennessee	7.5	1.5	6.3	—	2.2	—	5.5	0.6	797	2.9
Texas	17.8	5.3	8.0	1.3	—	0.4	10.9	2.8	1840	6.7
Virginia	12.0	8.8	4.2	—	—	—	5.9	2.9	499	4.3
West Virginia	8.1	1.9	1.9	1.6	—	—	3.9	1.1	476	2.4
Wyoming	19.3	8.5	6.5	4.7	2.7	—	12.3	5.4	501	8.9
2. Lack of seat-belt use[4]										
Alabama	60.1	58.5	64.0	65.5	60.2	55.2	61.4	59.6	696	60.4
Alaska	48.6	43.4	62.7	54.8	61.4	52.8	55.2	48.4	845	52.0
Arizona	55.4	54.8	58.5	57.1	50.6	41.4	55.8	53.2	1535	54.5
Arkansas	81.0	67.6	82.6	71.1	63.2	66.0	74.4	68.2	500	71.1
California	52.8	46.9	52.9	50.1	45.0	42.1	51.4	47.1	1516	49.1
Delaware	51.4	66.5	46.2	60.3	55.9	45.1	50.9	58.8	485	54.8
D.C.	35.4	47.1	39.8	37.4	38.9	51.1	37.6	44.8	483	41.6
Florida	61.1	71.3	64.1	56.7	52.5	56.9	59.0	61.6	471	60.2
Indiana	62.5	62.2	76.6	59.0	52.0	59.0	64.3	60.2	479	62.3
Iowa	77.6	65.5	74.1	73.5	58.8	53.3	73.5	66.3	675	69.8
Kansas	76.2	66.7	63.0	63.5	62.7	59.7	68.7	63.4	481	65.9
Kentucky	68.8	71.2	60.9	64.5	57.0	48.2	63.0	62.1	456	62.6
Michigan	58.7	55.7	49.2	55.8	55.6	50.2	54.5	54.3	1448	54.4
Montana	71.0	64.7	55.3	59.5	62.8	49.2	63.9	58.3	500	61.0
Nebraska	70.4	60.6	66.1	70.1	55.7	57.5	65.3	62.8	481	64.0
New Hampshire	75.5	73.6	68.3	65.7	55.2	64.8	67.7	68.3	482	68.0
New Jersey	58.8	62.3	59.7	63.8	59.0	59.5	59.2	62.0	973	60.7
New Mexico	46.9	56.4	58.1	52.8	66.7	51.4	55.0	54.0	960	54.5
Ohio	65.8	61.6	57.8	58.0	60.4	58.8	61.8	59.7	558	60.6
North Carolina	62.6	74.0	62.3	56.2	56.9	67.5	60.9	66.3	462	63.7
Tennessee	61.8	61.1	69.6	56.3	53.4	50.2	61.8	56.2	797	58.9
Texas	65.6	61.8	64.7	55.2	61.3	57.9	64.4	58.7	1840	61.5
Virginia	60.2	50.6	44.1	46.8	49.2	50.1	51.5	49.0	499	50.2
West Virginia	73.3	58.9	72.7	68.2	68.3	62.3	71.7	62.8	476	67.0
Wyoming	60.1	51.4	59.9	52.1	39.2	54.0	56.7	52.2	501	54.5

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[1] Rate per 100 respondents

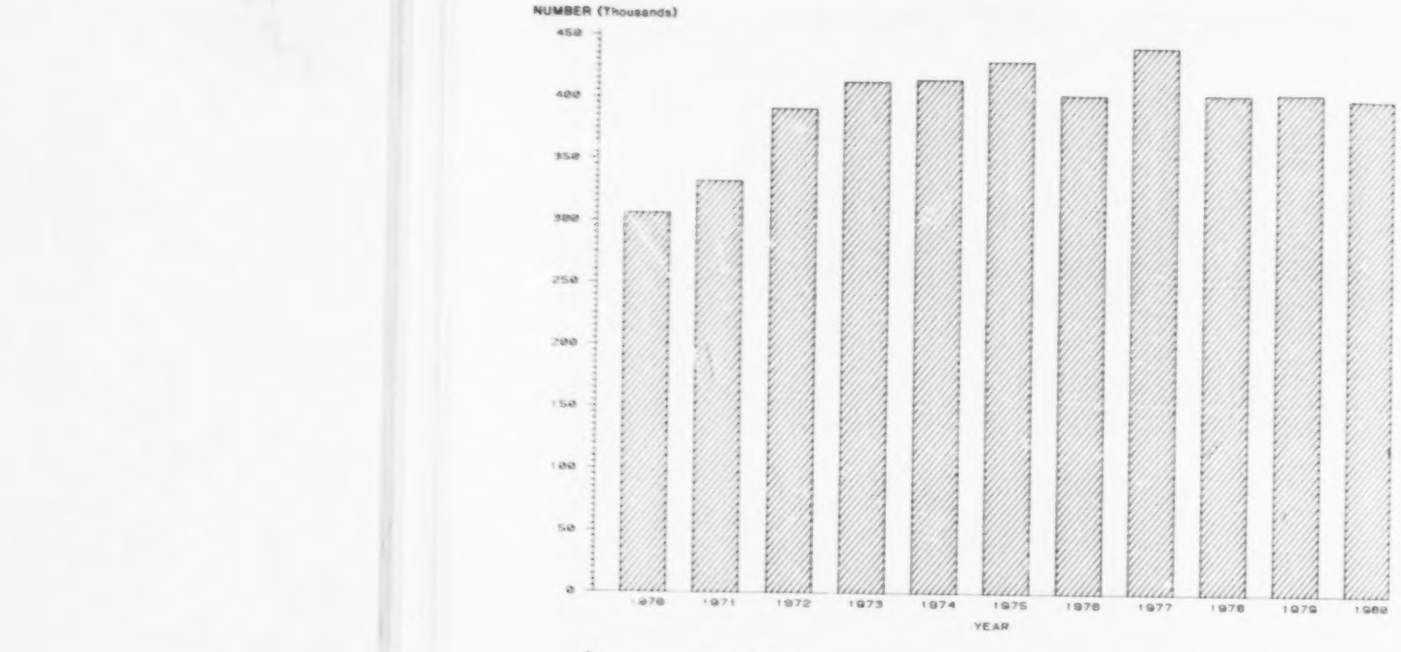
[2] Person who has driven after having too much to drink at least once in past *month*

[3] Person who has driven after having too much to drink at least once in past *year*

[4] Person who has never used a seat belt while riding in or driving a car

SURGICAL STERILIZATION OF FEMALES

SURGICAL STERILIZATION — Number of hysterectomies performed in hospitals,* on women ages 15-44 years, United States, 1970-1980



*Non-federal, short-stay hospitals.

Hysterectomy is one of the most frequently performed major operations for women of reproductive age in the United States. The number of hysterectomies performed in the United States increased from 306,000 in 1970 to 442,000 in 1977, decreasing to 401,000 in 1980. According to data from the National Hospital Discharge Survey, during the 2-year period 1979-1980, an estimated 806,000 women ages 15-44 years had hysterectomies (excluding radical procedures) in U.S. short-stay hospitals.

SURGICAL STERILIZATION — Hysterectomy rates[1] for women ages 15-44 years, by selected demographic variables, United States, 1979-1980

Variables	1979	1980
Geographic region		
Northeast	4.3	4.6
North Central	7.7	7.7
South	11.2	10.5
West	7.6	5.9
Age		
15-24	0.8	1.0
25-34	9.9	8.8
35-44	17.0	16.5
Race[2]		
White	7.8	7.6
Black	9.5	7.9
Marital status[2]		
Currently married	11.3	10.5
Previously married	14.0	13.3
Never married	1.5	2.2
Total	8.0	7.6
Number (thousands)	405	401

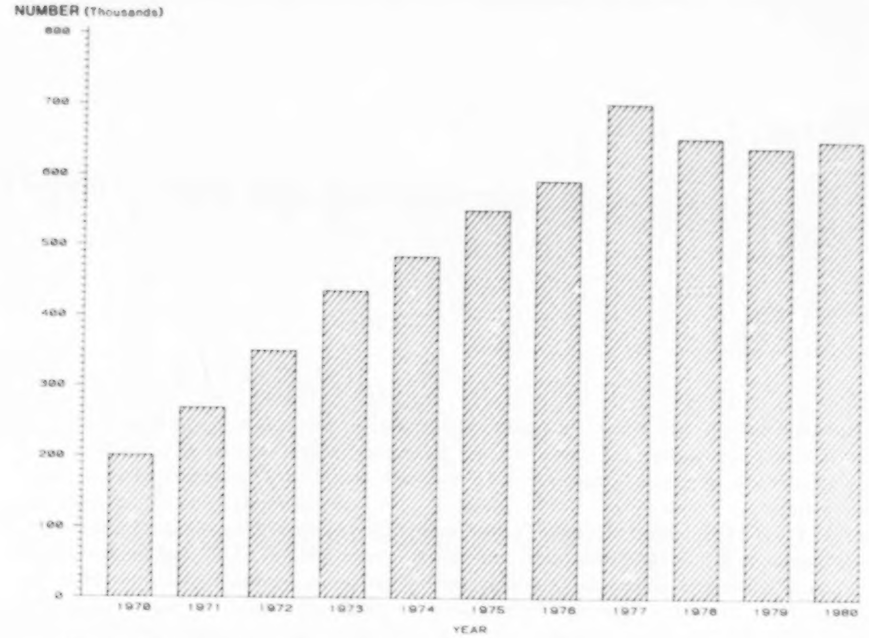
[1] Per 1,000 women ages 15-44 years.

[2] Unknowns were redistributed according to the percentage known.

The nationwide hysterectomy rate decreased from 8.0/1,000 women ages 15-44 in 1979 to 7.6 in 1980, the lowest rate since 1971. Hysterectomy rates were highest in the South and lowest in the Northeast. Of women ages 15-44 years, the 35- to 44-year group had the highest hysterectomy rates in each of the two years. Although more than 70% of hysterectomies in 1979 and 1980 were obtained by white women, the hysterectomy rate for black women was higher (8.7/1,000 women) than the rate for white women (7.7/1,000 women) ages 15-44. However, the racial difference in hysterectomy rates narrowed markedly in 1980. Previously married women had higher hysterectomy rates (13.6/1,000 women ages 15-44 years) than either currently married (10.9) or women who had never been married (1.8). The proportion of women ages 15-44 years who had vaginal hysterectomies (as a percentage of all hysterectomies) decreased from 25% in 1979 to 22% in 1980. Women in the West had a higher percentage of vaginal hysterectomies than women in the other regions. The average length of hospital stay associated with hysterectomy decreased slightly from 7.8 nights in 1979 to 7.7 in 1980. Women who had vaginal hysterectomies spent an average of 6.8 nights hospitalized, compared with 8.0 nights for women who had abdominal hysterectomies. Regardless of the type of surgical procedure, women in the West consistently spent fewer nights (6.6) in the hospital for hysterectomies than did women in the other regions (South—7.6, North Central—8.2, and Northeast—8.7).

SURGICAL STERILIZATION OF FEMALES

SURGICAL STERILIZATION — Number of tubal sterilizations performed in hospitals,* on women ages 15-44 years, United States, 1970-1980



*Non-federal, short-stay hospitals.

Tubal sterilization is the intra-abdominal surgical procedure most frequently performed on reproductive-age women. The number of tubal sterilizations performed in the United States hospitals increased from 201,000 in 1970 to 702,000 in 1977 and decreased to 650,000 in 1980. According to data from the National Hospital Discharge Survey, in the 2-year period 1979-1980, an estimated 1.3 million women ages 15-44 years had a tubal sterilization in U.S. short-stay hospitals. It is possible that this decrease reflects, at least in part, an increased performance of outpatient tubal sterilizations.

SURGICAL STERILIZATION — Tubal sterilization rates[1] for women ages 15-44 years, by selected demographic variables, United States, 1979-1980

Variables	1979	1980
Geographic region		
Northeast	12.2	11.4
North Central	12.1	11.8
South	16.0	16.1
West	8.7	8.2
Age		
15-24	5.8	5.9
25-34	22.2	21.3
35-44	11.1	10.1
Race[2]		
White	12.0	11.6
Black	16.7	16.8
Total	12.7	12.4
Number (thousands)	640	650

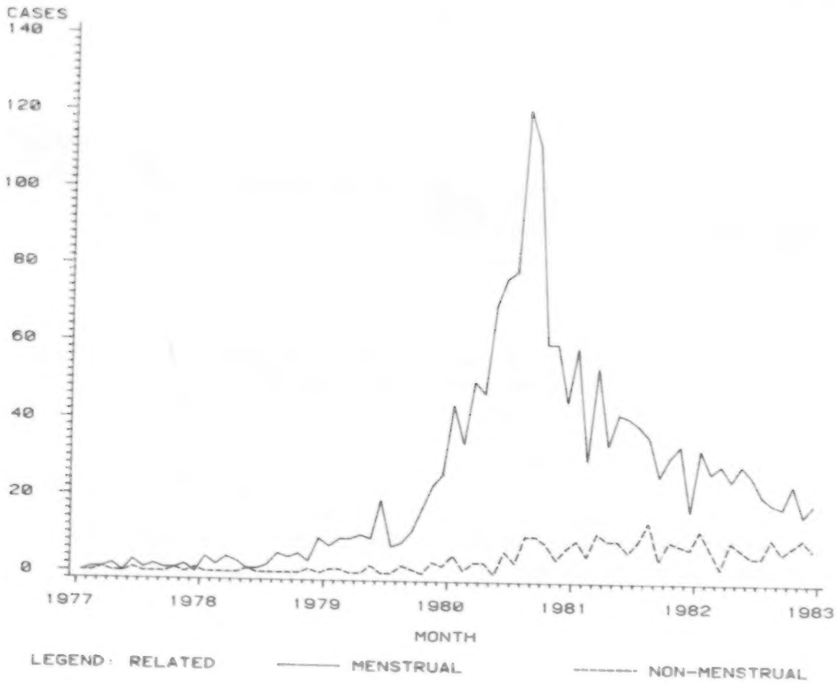
[1] Per 1,000 women ages 15-44 years

[2] Race unknown was redistributed according to the percentage of race known

The tubal sterilization rate decreased from 12.7/1,000 women ages 15-44 years in 1979 to 12.4 in 1980. Tubal sterilization rates continued to vary by region, and the West still had lower rates than other regions in the country. Women ages 25-34 years had the highest sterilization rates. Rates for black women were higher than those for white women, and black women tended to be younger at the time of tubal sterilization than did white women. The proportion of tubal sterilizations performed on women who were not pregnant at the time of surgery decreased from 49% in 1979 to 47% in 1980. The number of tubal sterilizations performed with a laparoscope decreased from 31% in 1979 to 29% in 1980. In both 1979 and 1980, approximately 12% of women who had tubal sterilization not associated with pregnancy in hospitals did not stay overnight.

TOXIC-SHOCK SYNDROME

TOXIC-SHOCK SYNDROME — Reported cases, by month of onset, United States, 1977-1982



As of June 15, 1983, 395 cases of toxic-shock syndrome (TSS) with onset in 1982 had been reported, down from the 877 and 558 reported cases with onset in 1980 and 1981, respectively. Of the 1982 cases, 2.5% were fatal, as were 4.8% and 3.0% of the cases in 1980 and 1981. Nonmenstrual TSS accounted for 88 (22.3%) of the reported 1982 cases; nonmenstrual cases made up 6.8% and 17.9% of the reported cases in 1980 and 1981, respectively. TSS continues to be reported primarily among women (92% of cases in 1982) and among white non-Hispanics (97% of cases in 1982); 58% of the 1982 cases were among persons in the 15-24 year age group.

TSS cases were reported by 43 states in 1982. The distribution of cases by state has changed coincident with intensity of case-finding efforts in certain states.

TOXIC-SHOCK SYNDROME — Reported cases, by area and age group, United States, 1982

Area	Total	<10	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	Unk.
United States	**395**[1]	**9**	**22**	**144**	**85**	**64**	**35**	**19**	**4**	**12**	**1**
New England	**16**	—	**1**	**5**	**3**	**2**	**4**	—	—	**1**	—
Maine	3	—	—	—	2	1	—	—	—	—	—
N.H.	3	—	1	1	—	—	—	—	—	1	—
Vt.	1	—	—	—	—	—	1	—	—	—	—
Mass.	4	—	—	2	—	—	2	—	—	—	—
R.I.	4	—	—	2	1	1	—	—	—	—	—
Conn.	1	—	—	—	—	—	1	—	—	—	—
Mid. Atlantic	**28**	**1**	**3**	**11**	**9**	**2**	**1**	—	—	**1**	—
N.Y.	3	1	1	—	—	1	—	—	—	—	—
N.J.	9	—	1	3	4	—	—	—	—	1	—
Pa.	16	—	1	8	5	1	1	—	—	—	—
E.N. Central	**94**	**2**	**5**	**41**	**18**	**12**	**6**	**6**	**2**	**2**	—
Ohio	25	1	2	15	5	1	1	—	—	—	—
Ind.	1	—	—	—	—	—	—	1	—	—	—
Ill.	23	1	1	9	3	2	2	4	1	—	—
Mich.	11	—	2	2	3	4	—	—	—	—	—
Wis.	34	—	—	15	7	5	3	1	1	2	—
W.N. Central	**69**	—	**1**	**26**	**18**	**9**	**9**	**4**	—	**1**	—
Minn.	31	—	—	10	10	4	5	1	—	1	—
Iowa	15	—	—	6	4	2	2	1	—	—	—
Mo.	13	1	—	6	2	2	1	1	—	—	—
N.Dak.	—	—	—	—	—	—	—	—	—	—	—
S.Dak.	3	—	—	2	—	1	—	—	—	—	—
Nebr.	4	—	1	2	—	—	—	1	—	—	—
Kans.	3	—	—	—	2	—	1	—	—	—	—
S. Atlantic	**28**	—	**3**	**13**	**2**	**5**	**3**	**1**	—	—	—
Del.	1	—	1	—	—	—	—	—	—	—	—
Md.	3	—	—	3	—	—	—	—	—	—	—
D.C.	—	—	—	—	—	—	—	—	—	—	—
Va.	11	—	1	3	2	3	1	1	—	—	—
W. Va.	4	—	1	2	—	—	1	—	—	—	—
N.C.	2	—	—	2	—	—	—	—	—	—	—
S.C.	1	—	—	1	—	—	—	—	—	—	—
Ga.	5	1	—	1	—	2	1	—	—	—	—
Fla.	1	—	—	1	—	—	—	—	—	—	—
E.S. Central	**3**	—	—	**2**	—	**1**	—	—	—	—	—
Ky.	—	—	—	—	—	—	—	—	—	—	—
Tenn.	—	—	—	—	—	—	—	—	—	—	—
Ala.	2	—	—	1	—	1	—	—	—	—	—
Miss.	1	—	—	1	—	—	—	—	—	—	—
W.S. Central	**29**	**1**	**2**	**12**	**6**	**5**	**2**	**1**	—	—	—
Ark.	—	—	—	—	—	—	—	—	—	—	—
La.	1	—	—	—	—	1	—	—	—	—	—
Okla.	3	—	1	1	—	—	—	—	—	—	—
Texas	25	1	1	11	6	4	2	1	—	—	—
Mountain	**67**	—	**4**	**18**	**15**	**16**	**6**	**5**	**1**	**2**	—
Mont.	1	—	—	1	—	—	—	—	—	—	—
Idaho	2	—	—	2	—	—	—	—	—	—	—
Wyo.	—	—	—	—	—	—	—	—	—	—	—
Colo.	27	—	2	9	6	5	2	2	—	1	—
N.Mex.	1	—	—	—	—	—	—	—	1	—	—
Ariz.	3	—	—	—	1	—	—	2	—	—	—
Utah	32	—	2	5	8	11	4	1	—	1	—
Nev.	1	—	—	1	—	—	—	—	—	—	—
Pacific	**60**	**2**	**3**	**16**	**14**	**12**	**4**	**2**	**1**	**5**	**1**
Wash.	6	—	1	—	2	—	—	1	—	2	—
Oreg.	16	—	1	6	2	5	—	1	1	—	—
Calif.	38	2	1	10	10	7	4	—	—	3	1
Alaska	—	—	—	—	—	—	—	—	—	—	—
Hawaii	—	—	—	—	—	—	—	—	—	—	—

[1] Total includes 1 unknown area.

Appendix Morbidity Tables (1933-1982)

Table 1. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1973-1982 ....

Table 2. NOTIFIABLE DISEASES — Summary of reported cases per 100,000 population, United States, 1973-1982 ....

Table 3. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1963-1972 ....

Table 4. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1953-1962 ....

Table 5. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1943-1952 ....

Table 6. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1933-1942 ....

Appendix Mortality Tables (1971-1980)

Table 7. NOTIFIABLE DISEASES — Deaths from specified notifiable diseases, United States, 1971-1980 ....

Table 8. NON-NOTIFIABLE DISEASES — Deaths from selected acute conditions, United States, 1971-1980 ....

TABLE 1. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1973-1982

Disease	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
U.S. total resident population (in thousands) 1980 census; July 1 est. 1973-1979, 1981-1982	231,534	229,307	226,505	220,099	218,059	216,332	214,659	213,121	211,390	209,851
Amebiasis	7,304	6,632	5,271	4,107	3,937	3,044	2,906	2,775	2,743	2,235
Anthrax	—	—	1	—	6	—	2	2	2	2
Aseptic meningitis	9,680	9,547	8,028	8,754	6,573	4,789	3,510	4,475	3,197	4,846
Botulism, total (including wound and unsp.)	97	103	89	45	105	129	55	20	28	34
Food-borne	33	22	18	12	65	61	30	17	28	34
Infant	61	76	68	25	36	43	15	1	—	—
Brucellosis (undulant fever)	173	185	183	215	179	232	296	310	240	202
Chancroid[1]	1,392	850	788	840	521	455	628	700	945	1,165
Chickenpox	167,423	200,766	190,894	199,081	154,089	188,396	183,990	154,248	141,495	182,927
Cholera	—	19	9	1	12	3	—	—	—	1
Diphtheria	2	5[2]	3	59	76	84	128	307	272	228
Encephalitis, primary	374	317[2]	323	312	290	341	530	2,362	206	163
Indeterminate	1,090	1,175[2]	1,039	1,192	1,061	1,073	1,121	1,702	958	1,450
Post-childhood infections	36	43[2]	40	84	78	119	175	237	218	354
Gonorrhea[1]	960,633	990,864	1,004,029	1,004,058	1,013,436	1,002,219	1,001,994	999,937	906,121	842,621
Granuloma inguinale[1]	17	66	51	76	72	75	71	60	47	62
Hepatitis A	23,403	25,802	29,087	30,407	29,500	31,153	33,288	35,855	40,358	50,749
Hepatitis B	22,177	21,152	19,015	15,452	15,016	16,831	14,973	13,121	10,631	8,451
Hepatitis non-A, non-B	2,629	....	....	....	....	*	....	....	....	....
Hepatitis, unspecified	8,564	10,975	11,894	10,534	8,776	8,639	7,488	7,158	8,351	*
Legionellosis[3]	654	408	475	593	761	359	235	....	*	....
Leprosy	250	256	223	185	168	151	145	162	118	146
Leptospirosis	100	82	85	94	110	71	73	93	68	57
Lymphogranuloma venereum[1]	235	263	199	250	284	348	365	353	394	408
Malaria	1,056	1,388	2,062	894	731	547	471	373	293	237
Measles (rubeola)	1,714	3,124	13,506	13,597	26,871	57,345	41,126	24,374	22,094	26,690
Meningococcal infections, total	3,056	3,525	2,840	2,724	2,505	1,828	1,605	1,478	1,346	1,378
Mumps	5,270	4,941	8,576	14,225	16,817	21,436	38,492	59,647	59,128	69,612
Pertussis (whooping cough)	1,895	1,248[2]	1,730	1,623	2,063	2,177	1,010	1,738	2,402	1,759
Plague	19	13[2]	18	13	12	18	16	20	8	2
Poliomyelitis, total	8	6	9	34	15	18	14	8	7	8
Paralytic	8	6[2]	8	26	9	17	12	8	7	7
Psittacosis	152	136[2]	124	137	140	94	78	49	164	33
Rabies, animal	6,212	7,118	6,421	5,119	3,254	3,130	3,073	2,627	3,151	3,640
Rabies, human	—	2	—	4	4	1	2	2	—	1
Rheumatic fever, acute	137	264	432	629	851	1,738	1,865	2,854	2,431	2,560
Rubella (German measles)	2,325	2,077	3,904	11,795	18,269	20,395	12,491	16,652	11,917	27,804
Rubella congenital syndrome	7	19	50	62	30	23	30	30	45	35
Salmonellosis (excluding typhoid fever)	40,936	39,990	33,715	33,138	29,410	27,850	22,937	22,612	21,980	23,818
Shigellosis	18,129	19,859	19,041	20,135	19,511	16,052	13,140	16,584	22,600	22,642
Smallpox	....	....	....	Last documented case occurred in 1949			....	....	....	....
Syphilis, primary and secondary[1]	33,613	31,266	27,204	24,874	21,656	20,399	23,731	25,561	25,385	24,825
Total all stages[1]	75,579	72,799	68,832	67,049	64,875	64,621	71,761	80,356	83,771	87,469
Tetanus	88	72	95	81	86	87	75	102	101	101
Trichinosis	115	206	131	157	67	143	115	252	120	102
Tuberculosis[4]	25,520	27,373	27,749	27,669	28,521	30,145	32,105	33,989	30,122	30,998
Tularemia	275	288	234	196	141	165	157	129	144	171
Typhoid fever (cases)	425	584	510	528	505	398	419	375	437	680
(Carriers)	60	73	62	71	62	....	....	NA	....	....
Typhus fever, flea-borne (endemic, murine)	58	61	81	69	46	75	69	41	26	32
Typhus fever, tick-borne (Rocky Mountain spotted)	976	1,192	1,163	1,070	1,063	1,153	937	844	754	668
Yellow fever	....	....	....	Last indigenous case reported 1911; last imported, 1924				....	....	....

*Not previously notifiable nationally.

[1] Civilian cases only.

[2] Corrected data.

[3] Data for 1982 recorded by date of report to state health department. Data for all previous years are from surveillance records reported by onset date.

[4] Case data subsequent to 1974 are not comparable to prior years due to changes in reporting criteria which became effective in 1975.

TABLE 2. NOTIFIABLE DISEASES — Summary of reported cases per 100,000 population, United States, 1973-1982

Disease	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Amebiasis	3.23	2.96	2.38	1.90	1.84	1.41	1.35	1.30	1.30	1.07
Anthrax	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aseptic meningitis	4.18	4.16	3.61	4.05	3.01	2.24	1.64	2.10	1.53	2.33
Botulism, total	0.04	0.04	0.04	0.02	0.05	0.06	0.03	0.01	0.01	0.02
Food-borne	0.01	0.01	0.01	0.01	0.03	0.04	0.01	0.01	0.01	0.02
Infant	0.03	0.03	0.03	0.01	0.02	0.02	0.01	0.00	—	—
Brucellosis (undulant fever)	0.07	0.08	0.08	0.10	0.08	0.11	0.14	0.15	0.11	0.10
Chancroid	0.61	0.37	0.35	0.38	0.24	0.21	0.29	0.33	0.46	0.56
Chickenpox	94.37	100.48	98.69	102.93	80.42	97.63	96.06	78.11	72.20	97.68
Cholera	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Diphtheria	0.00	0.00	0.00	0.03	0.03	0.04	0.06	0.14	0.13	0.11
Encephalitis, primary	0.16	0.14	0.14	0.15	0.13	0.16	0.25	1.11	0.10	0.08
indeterminate	0.46	0.51	0.46	0.54	0.49	0.50	0.52	0.80	0.45	0.69
Post-childhood infections	0.02	0.02	0.02	0.04	0.04	0.06	0.06	0.11	0.10	0.17
Gonorrhea	417.91	435.24	443.27	459.49	468.25	466.83	470.47	472.91	432.12	404.92
Granuloma inguinale	0.01	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.03
Hepatitis A	10.11	11.25	12.84	13.82	13.53	14.40	15.51	16.82	19.54	24.16
Hepatitis B	9.58	9.22	8.39	7.02	6.89	7.78	7.14	6.30	5.15	4.03
Hepatitis non-A non-B	1.39					*				
Hepatitis, unspecified	3.70	4.79	5.25	4.79	4.02	3.99	3.57	3.44	3.95	*
Legionellosis	0.35	0.18	0.21	0.27	0.35	0.17	0.11		*	
Leprosy	0.11	0.11	0.10	0.08	0.08	0.07	0.07	0.08	0.06	0.07
Leptospirosis	0.04	0.04	0.04	0.04	0.05	0.03	0.03	0.04	0.03	0.03
Lymphogranuloma venereum	0.10	0.12	0.09	0.11	0.13	0.16	0.17	0.17	0.19	0.20
Malaria	0.46	0.61	0.91	0.41	0.34	0.25	0.22	0.18	0.14	0.11
Measles (rubeola)	0.74	1.36	5.96	6.18	12.32	26.51	19.16	11.44	10.45	12.72
Meningococcal infections, total	1.32	1.54	1.25	1.24	1.15	0.84	0.75	0.69	0.64	0.66
Mumps	2.46	2.20	3.86	6.55	7.81	10.02	17.93	27.99	29.00	36.23
Pertusis (whooping cough)	0.82	0.54	0.76	0.74	0.95	1.02	0.47	0.82	1.15	0.84
Plague	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Poliomyelitis, total	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Paralytic	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00
Psittacosis	0.07	0.06	0.05	0.06	0.06	0.04	0.04	0.02	0.08	0.02
Rabies, human	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rheumatic fever, acute	0.09	0.17	0.30	0.44	0.60	1.23	1.32	2.01	1.79	1.92
Rubella (German measles)	1.00	0.91	1.72	5.36	8.38	9.43	5.82	7.81	5.64	13.25
Rubella congenital syndrome**	0.00	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Salmonellosis, excluding typhoid fever	17.68	17.44	14.88	15.06	13.49	12.87	10.74	10.61	10.40	11.35
Shigellosis	7.83	8.66	8.41	9.15	8.95	7.42	6.15	7.78	10.69	10.79
Smallpox				Last documented case occurred in 1949						
Syphilis, primary and secondary	14.62	13.73	12.01	11.38	10.00	9.50	11.14	12.09	12.11	11.93
Total all stages	32.88	31.98	30.39	30.66	30.00	30.10	33.69	38.00	39.95	42.03
Tetanus	0.04	0.03	0.04	0.04	0.04	0.04	0.03	0.05	0.05	0.05
Trichinosis	0.05	0.10	0.08	0.07	0.03	0.07	0.05	0.12	0.06	0.05
Tuberculosis	11.02	11.94	12.25	12.57	13.08	13.93	14.96	15.95	14.25	14.77
Tularemia	0.12	0.13	0.10	0.09	0.08	0.08	0.07	0.06	0.07	0.08
Typhoid fever (cases)	0.16	0.25	0.23	0.24	0.23	0.18	0.20	0.18	0.21	0.32
(Carriers)	0.03	0.03	0.03	0.03	0.03			NA		
Typhus fever, flea-borne (endemic, murine)	0.03	0.03	0.04	0.03	0.02	0.04	0.03	0.02	0.01	0.02
Typhus fever, tick-borne (Rocky Mountain spotted)	0.42	0.52	0.52	0.49	0.49	0.53	0.44	0.40	0.36	0.32
Yellow fever				Last indigenous case reported 1911; last imported, 1924						

Note Rates less than 0.01 after rounding are shown as 0.00.
Population data from those states where diseases were not notifiable (NN) were excluded from rate calculation. Civilian resident population was used for chancroid, gonorrhea, granuloma inguinale, lymphogranuloma venereum, and syphilis.

*Not previously notifiable nationally

**Per 1,000 live births

TABLE 3. NOTIFIABLE DISEASES—Summary of reported cases, United States, 1963-1972

Disease	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
U.S. total resident population, July 1, estimate (in thousands)	208,232	206,256	203,805	201,385	199,399	197,457	195,576	193,526	191,141	188,483
Amebiasis	2,199	2,752	2,888	2,915	3,005	3,157	2,921	2,768	3,304	2,886
Anthrax	2	5	2	4	3	2	5	7	5	3
Aseptic meningitis	4,634	5,176	6,480	3,672	4,494	3,082	3,058	2,329	2,177	1,844
Botulism	22	25	12	16	7	5	9	19	23	47
Brucellosis (undulant fever)	196	183	213	235	218	265	262	262	411	407
Chancroid	1,414	1,320	1,416	1,104	845	784	838	982	1,247	1,220
Chickenpox	164,114	...	...	...	... *	...	...	...	...	...
Cholera	—	1	—	—	—	—	—	2	—	—
Diphtheria	152	215	435	241	260	219	209	164	293	314
Encephalitis, primary	1,059	1,524	1,580	1,613	1,781	1,478	2,121	1,722	2,002 }	
Encephalitis, post-infectious	243	439	370	304	502	1,060	964	981	1,585 }	1,993
Gonorrhea	767,215	670,268	600,072	534,872	464,543	404,836	351,738	324,925	300,666	278,289
Granuloma inguinale	81	89	124	154	156	154	148	155	135	173
Hepatitis, serum	9,402	9,556	8,310	5,909	4,829	2,458	1,497 }			
Hepatitis, infectious	54,074	59,606	56,797	48,416	45,893	38,909	32,859 }	33,856	37,740	42,974
Leprosy	130	131	129	98	123	81	109	96	97	103
Leptospirosis	41	62	47	89	69	67	72	84	142	89
Lymphogranuloma venereum	756	692	612	520	485	371	308	878	732	586
Malaria	742	2,375	3,051	3,102	2,317	2,022	565	147	93	99
Measles (rubeola)	32,275	75,290	47,351	25,826	22,231	62,705	204,136	261,904	458,083	385,156
Meningococcal infections	1,323	2,262	2,505	2,951	2,623	2,161	3,381	3,040	2,826	2,470
Mumps	74,215	124,939	104,953	90,918	152,209	...	...	... *	...	...
Pertussis (whooping cough)	3,287	3,036	4,249	3,285	4,810	9,718	7,717	6,799	13,005	17,135
Plague	1	2	13	5	3	3	5	8	—	1
Poliomyelitis, total	31	21	33	20	53	41	113	72	122	449
Paralytic	29	17	31	18	53	40	106	61	106	396
Psittacosis	52	32	35	57	43	41	50	60	53	76
Rabies, animal	4,369	4,310	3,224	3,490	3,591	4,481	4,178	4,574	4,780	3,929
Rabies, human	2	2	3	1	1	2	1	2	1	1
Rheumatic fever, acute	2,614	2,793	3,227	3,229	3,470	3,985	4,472	4,998	7,491	7,561
Rubella (German measles)	25,507	45,086	56,552	57,686	49,371	46,888	46,975	...	... *	...
Rubella congenital syndrome	42	68	77	31	14	10	11	...	... *	...
Salmonellosis, excluding typhoid fever	22,151	21,928	22,096	18,419	16,514	18,120	16,841	17,161	17,144	15,390
Shigellosis (bacillary dysentery)	20,207	16,143	13,845	11,946	12,180	13,474	11,888	11,027	12,984	13,009
Smallpox	...	...	...	Last documented case occurred in 1949			...	...	...	...
Streptococcal sore throat and scarlet fever	NN	NN	NN	450,008	435,013	453,351	427,752	395,168	402,334	342,161
Syphilis, primary and secondary	24,429	23,783	21,982	19,130	19,019	21,053	21,414	23,338	22,969	22,251
Total, all stages	91,149	95,997	91,382	92,162	96,271	102,581	105,159	112,842	114,325	124,137
Tetanus	128	116	148	192	178	263	235	300	289	325
Trichinosis	89	103	109	215	77	66	115	199	198	208
Tuberculosis (newly reported active cases)	32,882	35,217	37,137	39,120	42,623	45,647	47,767	49,016	50,874	54,042
Tularemia	152	187	172	149	186	184	208	264	342	327
Typhoid fever	398	407	346	364	395	396	378	454	501	566
Typhus fever, flea-borne (endemic, murine)	18	23	27	36	36	52	33	28	30	35
Typhus fever, tick-borne (Rocky Mountain spotted)	523	432	380	498	298	305	268	281	277	216
Yellow fever	...	...	...	Last indigenous case reported 1911, last imported 1924				...	...	...

*Not previously notifiable nationally.

TABLE 4. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1953-1962
(Figures exclude Alaska 1953-1958 and Hawaii, 1953-1959.)

Disease	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953
U.S. total resident population, July 1, estimate (in thousands)	185,771	182,992	179,979	176,513	173,320	170,371	167,306	164,308	161,164	158,242
Amebiasis	3,048	2,850	3,424	3,508	4,380	5,031	3,689	3,348	3,523	4,444
Anthrax	9	14	23	12	16	26	38	39	22	45
Aseptic meningitis	2,654	5,162[1]	1,593			*				
Botulism	10	14	12	20	6	28	17	16	18	18
Brucellosis (undulant fever)	409	636	751	892	924	983	1,300	1,444	1,623	2,032
Chancroid	1,344	1,438	1,680	1,537	1,595	1,637	2,135	2,649	3,003	3,338
Cholera	—	—	—	—	—	—	—	—	—	—
Dengue	—	—	—	—	—	—	2	1	6	8
Diphtheria	444	617	918	934	918	1,211	1,568	1,984	2,041	2,355
Encephalitis, acute infectious	2,094	2,248	2,341	2,437	2,587	2,135	2,624	2,166	2,606	1,936
Gonorrhea	263,714	264,158	258,933	240,254	232,386	214,496	224,346	236,197	242,050	238,340
Granuloma inguinale	207	241	296	265	314	348	357	490	618	667
Hepatitis, infectious and serum	53,016	72,651	41,666	23,574	16,294	14,922	19,234	31,961	50,093	33,700
Leprosy	80	63	54	44	39	36	52	75	56	60
Leptospirosis	79	71	53	83	55	47	44	24	48	42
Lymphogranuloma venereum	590	787	835	604	434	448	500	762	875	983
Malaria	118	73	72	71	85	132	234	522	715	1,310
Measles (rubeola)	481,530	423,919	441,703	406,162	763,094	486,799	611,936	555,156	682,720	449,146
Meningococcal infections	2,150	2,232	2,259	2,180	2,581	2,691	2,735	3,455	4,436	5,077
Pertussis (whooping cough)	17,749	11,468	14,809	40,005	32,148	28,295	31,732	62,786	60,886	37,129
Plague	—	3	2	4	—	1	1	—	—	—
Poliomyelitis	910	1,312	3,190	8,425	5,787	5,485	15,140	28,985	38,476	35,592
Paralytic	762	988	2,525	6,289	3,697	2,499	7,911	13,850	18,308	15,648
Psittacosis	79	102	113	147	158	278	568	334	563	169
Rabies, human[2]	2	3	2	7	5	5	10	4	13	12
Rabies, animal	3,732	3,599	3,567	4,177	4,787	4,542	5,681	5,799	7,297	8,903
Rheumatic fever, acute	7,977	10,470	9,022	8,285	6,889	6,427	6,562		*	
Salmonellosis, excluding typhoid fever	9,680	8,542	6,929	6,606	6,363	6,693	6,704	5,447	5,375	3,946
Shigellosis	12,443	12,571	12,487	12,888	11,861	9,822	10,306	13,912	13,846	16,533
Smallpox				Last documented case occurred in 1949						
Streptococcal sore throat and scarlet fever	315,809	338,410	315,173	334,715	264,097	226,973	176,392	147,502	147,785	132,935
Syphilis, primary and secondary	21,067	19,851	16,145	9,799	7,176	6,576	6,392	6,454	7,147	8,637
Total, all stages	126,245	124,658	122,538	120,824	113,884	123,758	130,201	122,392	130,697	148,573
Tetanus	322	379	368	445	445	447	468	462	524	506
Trichinosis	194	306	160	227	176	178	262	264	277	395
Tuberculosis[3]	53,315	53,726	55,494	57,535	63,534	67,149	69,895	77,368	79,775	84,304
Tularemia	328	365	390	459	587	601	522	584	681	601
Typhoid fever	608	814	816	859	1,043	1,231	1,700	1,704	2,169	2,252
Typhus fever, flea-borne (endemic, murine)	32	46	68	51	71	113	98	135	163	221
Typhus fever, tick-borne (Rocky Mountain spotted)	240	219	204	199	243	240	293	295	294	313
Yellow fever				Last indigenous case reported 1911; last imported, 1924						

[1] Includes Meningitis, other, for some states.
[2] Registered deaths, 1953-1960.
[3] Includes new active cases.

*Not previously notifiable nationally.

TABLE 5. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1943-1952

Disease	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943
U.S. total resident population, July 1, estimate (in thousands)	155,687	153,310	151,235	148,665	146,093	143,446	140,054	132,481	132,885	134,245
Amebiasis	4,280	3,550	4,568	5,543	4,871	3,365	4,093	3,412	3,241	3,329
Anthrax	47	60	49	54	60	69	40	40	49	72
Botulism	18	33	20	24	39	44	NA	NA	NA	NA
Brucellosis (undulant fever)	2,537	3,139	3,510	4,235	4,991	6,321	5,887	5,049	4,436	3,733
Chancroid[1]	3,738	4,233	4,977	6,707	7,661	9,515	7,091	5,515	7,878	8,354
Cholera	—	—	—	—	—	—	—	—	—	—
Dengue	5	16	26	46	24	35	40	106	61	123
Diphtheria	2,960	3,983	5,796	7,969	9,493	12,262	16,354	18,675	14,150	14,811
Encephalitis, acute infectious	1,912	1,123	1,135	903	730	785	728	785	788	771
Gonorrhea[1]	244,957	254,470	286,746	317,950	345,501	380,666	368,020	287,181	300,676	275,070
Granuloma inguinale[1]	951	1,352	1,783	2,402	2,469	2,330	2,232	1,857	1,759	1,748
Hepatitis, infectious	17,428	7,349	2,820	2,027	709	1092	NA	NA	NA	NA
Leprosy	57	57	44	41	63	56	43	40	37	35
Leptospirosis	62	9	30	17	18	14	NA	NA	NA	NA
Lymphogranuloma venereum[1]	1,200	1,300	1,427	1,925	2,429	2,526	2,603	2,631	2,858	2,593
Malaria	7,023	5,600	2,184	4,151	9,606	15,116	48,610	62,763	57,626	54,554
Measles	683,077	530,118	319,124	625,281	615,104	222,375	695,843	146,013	630,291	633,627
Meningococcal infections	4,884	4,164	3,788	3,519	3,376	3,420	5,693	8,208	16,312	18,223
Pertussis (whooping cough)	45,030	68,687	120,718	69,479	74,715	156,517	109,860	133,792	109,873	191,890
Plague	—	1	3	3	—	1	—	—	1	1
Poliomyelitis, total	57,879	28,386	33,300	42,033	27,726	10,827	25,698	13,624	19,029	12,450
Paralytic	21,269	10,037	NA	NA	NA	NA	NA	NA	NA	NA
Psittacosis	135	25	26	35	32	27	26	27	6	1
Rabies, human[2]	24	18	18	10	24	26	34	43	56	47
Rabies, animal[3]	8,445	8,008	7,901	7,587	8,495	8,920	10,850	9,928	10,487	9,649
Salmonellosis, excluding typhoid fever	2,596	1,773	1,233	1,243	882	951	723	649	712	731
Shigellosis (bacillary dysentery)	23,197	32,215	23,367	29,080	23,753	17,048	24,286	34,943	38,230	31,590
Smallpox	—	—	—	49	57	176	337	346	397	765
Streptococcal sore throat and scarlet fever	113,677	84,151	64,494	87,220	91,295	93,595	125,511	185,570	200,539	150,362
Syphilis, primary and secondary	10,449	14,485	23,939	41,942	68,174	93,545	94,957	77,007	78,443	82,204
Total, all stages[1]	167,762	174,924	217,558	256,463	314,313	355,592	363,647	359,114	467,755	575,593
Tetanus	484	506	486	579	601	560	NA	NA	NA	NA
Trichinosis	367	393	327	353	487	451	NA	NA	NA	NA
Tuberculosis[4]	86,700	118,491	121,742	134,865	137,006	134,946	119,256	114,931	126,294	120,253
Tularemia	668	702	927	1,179	1,086	1,401	1,355	900	781	966
Typhoid fever	2,341	2,128	2,484	2,795	2,840	3,075	3,268	4,211	4,599	4,690
Typhus fever, flea-borne (endemic, murine)	205	378	685	985	1,171	2,050	3,365	5,193	5,401	4,528
Typhus fever, tick-borne (Rocky Mountain spotted)	327	347	464	570	547	596	587	472	470	473
Yellow fever	Last indigenous case reported 1911; last imported, 1924									

[1] Data reported for fiscal years 1943-1946; calendar years 1947-1952.
[2] Registered deaths.
[3] Data from Bureau of Animal Industry, U.S. Department of Agriculture, Agricultural Research Administration, 1943-1951.
[4] Includes newly reported active and inactive cases, 1943-1951; new active cases, 1952.

TABLE 6. NOTIFIABLE DISEASES — Summary of reported cases, United States, 1933-1942

Disease	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933
U.S. total resident population, July 1, estimate (in thousands)	133,920	133,121	131,954	130,880	129,825	128,825	128,053	127,250	126,374	125,579
Amebiasis	2,721	3,201	3,033	3,001	2,297	2,049	1,618	1,619	2,583	1,986
Anthrax	94	104	76	54	52	65	77	61	65	59
Botulism	...	...	...	...	...	NA	...	...	...	...
Brucellosis (undulant fever)	3,228	3,484	3,310	3,501	4,379	2,676	2,099	2,008	2,017	1,788
Chancroid	5,477	3,384	...	...	...	NA	...	...	...	...
Cholera	—	—	—	—	...	...	NA	...	...	...
Dengue	171	600	86	144	250	350	227	582	5,457	304
Diphtheria	16,260	17,987	15,536	24,053	30,508	28,536	30,018	39,226	43,156	50,462
Encephalitis, acute infectious	666	3,516	1,030	928	1,073	1,030	830	1,047	1,509	3,340
Gonorrhea[1]	212,403	193,468	175,841	182,314	198,439	182,460	163,465	162,763	153,542	149,823
Granuloma inguinale	1,278	639	...	...	...	NA	...	...	...	...
Hepatitis, infectious	...	...	...	...	...	NA	...	...	...	...
Leprosy	70	...	...	...	...	NA	...	...	...	...
Leptospirosis	...	...	...	...	...	NA	...	...	...	...
Lymphogranuloma venereum	1,888	1,381	...	...	...	NA	...	...	...	...
Malaria	60,077	68,074	78,129	82,654	84,205	108,459	133,927	137,513	133,226	125,556
Measles	547,413	894,134	291,162	403,317	822,811	321,510	299,614	743,856	799,455	400,894
Meningococcal infections	3,823	2,006	1,653	1,972	2,859	5,484	7,320	5,873	2,470	2,913
Pertussis (whooping cough)	191,383	222,202	183,866	183,188	227,319	214,652	147,237	180,518	265,269	179,135
Plague	1	2	1	1	—	2	4	—	2	1
Poliomyelitis, acute	4,167	9,086	9,804	7,343	1,705	9,514	4,523	10,839	7,510	5,043
Psittacosis	23	11	...	...	...	NA	...	...	...	...
Rabies, human[2]	36	39	41	40	66	59	73	77	80	65
Rabies, animal[3]	7,137	7,847	7,210	9,365	6,816	6,632	4,853	5,022	5,455	4,099
Salmonellosis	504	...	...	...	...	NA	...	...	...	...
Shigellosis (bacillary dysentery)	25,572	18,972	17,501	16,537	15,886	...	NA	...	...	...
Smallpox	865	1,396	2,795	9,877	14,939	11,673	7,834	7,957	5,371	6,491
Streptococcal sore throat and scarlet fever	135,755	139,424	165,766	173,162	198,428	236,361	250,487	268,542	227,495	218,966
Syphilis, primary and secondary[1]	75,312	68,231	...	...	...	NA	...	...	...	...
Total, all stages[1]	479,601	485,560	472,900	478,738	480,140	336,258	267,717	255,856	231,129	238,656
Tetanus	...	...	...	...	...	NA	...	...	...	...
Trichinosis	...	...	...	...	...	NA	...	...	...	...
Tuberculosis[4]	117,204	105,567	102,984	103,922	107,021	112,394	107,086	111,856	113,020	114,412
Tularemia	1,024	1,530	1,620	2,291	2,088	960	891	782	917	895
Typhoid fever[5]	5,895	8,601	9,809	13,069	14,903	16,033	15,898	18,355	22,217	23,349
Typhus fever, flea-borne (endemic, murine)	3,736	2,784	1,878	2,996	2,294	2,394	1,733	1,287	1,375	2,070
Typhus fever, tick-borne (Rocky Mountain spotted)	498	516	457	559	434	432	365	492	456	471
Yellow fever	Last indigenous case reported 1911; last imported, 1924									

[1] Data reported for fiscal years
[2] Registered deaths
[3] Data from Bureau of Animal Industry, U.S. Department of Agriculture, Agricultural Research Administration
[4] Includes newly reported active and inactive cases
[5] Includes cases of paratyphoid

TABLE 7. NOTIFIABLE DISEASES — Deaths from specified notifiable diseases, United States, 1971-1980

(Numbers in ICD column refer to the category numbers listed in the Ninth Revision of the International Classification of Diseases, 1975.)

Cause of Death	ICD	1980	1979	1978	1977	1976	1975	1974	1973	1972[1]	1971
Amebiasis	006	22	19	14	28	36	35	25	31	52	60
Anthrax	022	—	—	—	—	—	—	—	—	—	—
Botulism, foodborne	005.1	5	2	5	6	3	3	6	6	6	7
Brucellosis	023	—	2	3	—	2	—	—	1	6	3
Chancroid	099.0	—	—	.	—	—	—	—	—	—	—
Chickenpox	052	78	103	91	89	106	83	106	138	122	98
Cholera	001	1	—	—	—	—	—	—	—	—	—
Diphtheria	032	1	1	4	5	7	5	5	10	10	13
Encephalitis, acute infectious[2]	062-064,049	188	172	185	206	253	386	278	326	268	320
Gonococcal infections	098	7	1	9	1	1	1	1	11	8	9
Granuloma inguinale	099.2	1	1	1	—	—	1	—	—	—	—
Hepatitis, viral, infectious (Hepatitis A)	070.0,070.1	112	129	508	508	567	612	630	656	778	906
Hepatitis, viral, serum (Hepatitis B)	070.2,070.3	294	280								
Hepatitis, viral, other and unsp.	070.4-070.9	403	384								
Leprosy	030	—	3	4	1	1	2	2	1	.	1
Leptospirosis	100	2	4	5	8	12	7	5	6	10	6
Lymphogranuloma venereum	099.1	1	1	—	—	—	2	2	2	4	2
Malaria	084	—	3	5	3	4	4	4	7	—	6
Measles (rubeola)	055	11	6	11	15	12	20	20	23	24	90
Meningococcal infection	036	387	404	403	338	330	308	305	330	350	509
Mumps	072	2	2	3	5	8	8	6	12	16	15
Pertussis (whooping cough)	033	11	6	6	10	7	6	14	5	6	18
Plague	020	5	2	—	—	2	3	1	—	—	—
Poliomyelitis	045.0-045.9	6	4	13	16	16	9	3	10	2	18
Bulbar or polioencephalitis	045.0	—	—	—	2	3	2	—	4	—	2
With other paralysis	045.1	2	1	1	2	1	1	—	3	—	2
Non-paralytic	045.2	—	—	—	—	—	—	—	—	—	—
Unspecified	045.9	4	3	12	12	12	6	3	3	2	14
Psittacosis (ornithosis)	073	—	—	1	—	—	—	—	1	—	1
Rabies	071	—	4	2	—	1	2	—	1	2	2
Rheumatic fever, acute	390-392	109	114	138	125	149	155	175	183	180	230
Rubella (German measles)	056	1	1	10	17	12	21	15	16	14	20
Salmonellosis, including paratyphoid fever	002.1-002.9,003	89	70	79	73	61	67	59	76	68	81
Shigellosis	004	15	19	20	25	19	27	32	33	38	24
Syphilis	090-097	154	180	169	196	225	272	300	393	344	375
Tetanus	037	28	30	32	24	32	46	44	40	58	64
Trichinosis	124	1	2	—	—	1	—	—	1	2	4
Tuberculosis (all forms)	010-018	1,978	2,007	2,914	2,968	3,130	3,333	3,513	3,875	4,376	4,501
Tularemia	021	3	2	—	2	2	—	2	4	—	2
Typhoid fever	002.0	2	3	2	3	2	3	3	7	8	4
Typhus fever, flea-borne (endemic-murine)	081.0	—	—	—	—	1	—	—	1	—	—
Typhus fever, tick-borne (Rocky Mountain spotted)	082.0	38	32	30	43	41	29	49	38	50	36

[1] Based on 50% sample of death records.

[2] Arthropod-borne encephalitis and other non-arthropod-borne viral diseases of central nervous system.

Source: National Center for Health Statistics, *Vital Statistics of the United States, Vol. II, Part A*, for 1971-1978; *Monthly Vital Statistics Report, Advance Report of Final Mortality Statistics*, for 1979 and 1980.

Deaths are classified according to the Eighth Revision, ICD, for 1971-1978 and according to the Ninth Revision, ICD, for 1979 and 1980. Discontinuities for some causes may result due to the introduction of the Ninth Revision.

TABLE 8. NON-NOTIFIABLE CONDITIONS — Deaths from selected acute conditions, United States, 1971-1980

(Numbers in ICD column refer to the category numbers listed in the Ninth Revision of the International Classification of Diseases, 1975)

Cause of Death	ICD	1980	1979	1978	1977	1976	1975	1974	1973	1972*	1971
Abortion											
Septic	634.0,635.0,636.0 637.0,638.0	4	3	10	4	10	15	14	24	46	64
Non-septic	634.1-634.9,635.1-635.9, 636.1-636.9,637.1-637.9 638.1-638.9	9	13	6	16	6	12	13	12	24	35
Alcoholic dependence syndrome and alcoholic psychosis	291,303	4,804	4,517	5,662	5,418	5,193	5,253	5,379	5,167	4,908	4,999
Chronic liver disease and cirrhosis, alcoholic	571.0-571.3	12,938	12,547	12,828	13,029	13,289	12,932	13,161	12,624	12,576	11,892
Diabetes mellitus	250	34,851	33,192	33,841	32,989	34,508	35,230	37,329	38,208	38,674	38,256
Fungal infections											
Actinomycotic infections	039	46	47	15	12	11	9	9	8	10	12
Aspergillosis	117.3	79	84	98	112	66	63	50	55	42	32
Blastomycosis and paracoccidioidomycosis	116.0-116.1	25	17	2	2	2	2	1	-	-	3
Coccidioidomycosis	114	59	63	78	58	66	60	61	37	30	37
Cryptococcosis	117.5	112	105	146	134	123	131	122	125	136	119
Histoplasmosis	115	51	33	56	55	49	59	58	53	62	55
Candidiasis (moniliasis)	112	233	213	240	237	244	215	190	173	138	159
Giardiasis	007.1	2	1	-	-	1	-	1	-	-	1
Herpes zoster	053	181	146	133	136	113	132	112	95	86	75
Hydatid disease (Echinococcosis)	122	4	2	3	2	4	3	5	4	4	7
Meningitis, excluding meningococcal and tuberculous	320-322	1,415	1,393	1,560	1,526	1,589	1,630	1,539	1,523	1,482	1,553
Mononucleosis, infectious	075	23	13	17	13	18	11	24	25	18	22
Renal disease	403,580-589,590-593	26,479	25,243	23,663	23,744	24,096	23,634	24,769	25,875	26,934	27,023
Respiratory infections											
Bronchitis (acute bronchitis & bronchiolitis)	466	642	554	756	697	864	737	750	905	1,146	1,154
Influenza	487	2,702	604	4,052	1,304	7,877	4,277	2,201	5,131	4,986	1,504
Pneumonia (primary cause of death)	480-486	51,917	44,426	54,267	49,889	53,989	51,387	52,576	57,428	57,594	55,690
Upper respiratory infections, acute	460-465	392	397	321	368	384	342	377	453	504	522
Rheumatoid arthritis and other inflammatory polyarthropathies, rheumatism unsp. and fibrositis	714.0-714.4,729.0	1,410	1,280	1,308	1,396	1,343	1,311	1,356	1,402	1,292	1,304
Sepsis of childbirth	646.6,670	12	12	13	13	16	11	17	9	38	30
Streptococcal sore throat and scarlatina	034	5	14	5	14	14	15	22	20	16	23
Toxoplasmosis	130	4	6	13	19	13	11	13	13	14	21

*Based on 50% sample of death records.

Source: National Center for Health Statistics, *Vital Statistics of the United States, Vol. II*, for 1971-1978. *Monthly Vital Statistics Report, Advance Report of Final Mortality Statistics*, for 1979 and 1980.

Deaths are classified according to the Eighth Revision, ICD, for 1970-1978 and according to the Ninth Revision, ICD, for 1979 and 1980. Discontinuities for some causes may result due to the introduction of the Ninth Revision.

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SEXUALLY TRANSMITTED DISEASES TREATMENT GUIDELINES 1982

U.S. Department of Health and Human Services
Public Health Service
Centers for Disease Control
Center for Prevention Services
Venereal Disease Control Division
Atlanta, Georgia 30333

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These guidelines for treatment of sexually transmitted diseases (STD) were established after careful deliberation by a group of experts[*] *and staff of the Centers for Disease Control (CDC). Commentary received after dissemination of preliminary documents to a large group of physicians was also considered. Certain aspects of these guidelines represent the best judgment of experts. The guidelines should not be construed as rules, but rather as a source of guidance within the United States. This is particularly true for topics that are controversial or based on limited data.*

Chlamydia trachomatis Infections

Infections caused by *Chlamydia trachomatis* are the most prevalent sexually transmitted diseases in the United States today. The importance of serious complications related to chlamydial infections has been established. Diagnosis and treatment of these infections are frequently based on the clinical syndrome since chlamydial cultures often are unavailable. The following guidelines are for *culture-proven* infections caused by non-lymphogranuloma venereum (LGV) strains of *C. trachomatis*. For approaches to the treatment of common chlamydial infections when cultures are not available, see Common STD-Associated Syndromes, p.42S.

Uncomplicated Urethral, Endocervical, or Rectal Infection in Adults

Drug Regimens of Choice

Tetracycline hydrochloride (HCl): 500 mg, by mouth, 4 times a day for at least 7 days

OR

Doxycycline: 100 mg, by mouth, twice a day for at least 7 days

Alternative Regimens

(for patients in whom tetracyclines are contraindicated or not tolerated)

Erythromycin: 500 mg, by mouth, 4 times a day for at least 7 days

Sulfonamides are also active against *C. trachomatis*, but have not been extensively studied.

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Management of Sexual Partners

All persons exposed to *C. trachomatis* infection should be examined for STD and promptly treated for exposure to *C. trachomatis* with one of the above regimens.

Follow-up

Posttreatment cultures are advisable. Positive cultures may not be detectable until 3-6 weeks after treatment; when they are positive, patients should be treated again with one of the above regimens.

Chlamydial Urogenital Infections During Pregnancy

Treatment should be given to pregnant women who have culture-proven *C. trachomatis* infections or, if cultures are not available, to pregnant women whose sexual partners have nongonococcal urethritis.

The suggested treatment is erythromycin 500 mg, by mouth, 4 times a day on an empty stomach for at least 7 days. For women who cannot tolerate this regimen, a decreased dose of 250 mg, by mouth, 4 times a day should be used for at least 14 days. The optimal dose and duration of antibiotic therapy for pregnant women have not been established. There are currently no completely acceptable alternative regimens for women who are allergic to erythromycin or cannot tolerate erythromycin. In case of proven treatment failure, the woman should be treated again with erythromycin in either of the dosage schedules outlined above.

Treatment of the male partner(s) with tetracycline at the same time is an important part of the therapeutic regimen.

Chlamydial cultures are expensive and not widely available. Pregnant women at particular risk for chlamydial infections should have cultures taken if possible at their first prenatal visit. Important risk factors include the following: a pregnant woman is unmarried, is less than 20 years old, resides in a socially disadvantaged community (e.g., inner city), has other sexually transmitted diseases, has reported late for prenatal care, has partners with nongonococcal urethritis, has nongonococcal purulent endocervicitis, or has an abacterial urinary tract infection. (See Common STD-Associated Syndromes.)

Established Chlamydial Conjunctivitis of the Newborn

For all cases of ophthalmia neonatorum, appropriate tests should be done to rule out *Neisseria gonorrhoeae* as the cause.

The diagnosis of chlamydial conjunctivitis can be established by culture or Giemsa-stained conjunctival scrapings. Treatment consists of oral erythromycin syrup 50 mg/kg/day in 4 divided doses for at least 2 weeks. There is no indication that topical therapy provides additional benefit. If inclusion conjunctivitis recurs after therapy, erythromycin treatment should be reinstituted for an additional 1-2 weeks.

Chlamydial Pneumonia of Infancy

For established cases of lower respiratory disease due to *C. trachomatis*, the recommended therapy for infants is oral erythromycin syrup 50 mg/kg/day in 4 divided doses for at least 3 weeks. The optimal duration for therapy has not been established.

Gonococcal Infections

The following guidelines for the treatment of gonococcal infection in the United States take into account several observations: the increasing incidence of infections due to penicillinase-producing *N. gonorrhoeae* (PPNG), unpublished reports of the emergence of tetracycline-resistant gonococci in several geographic areas, the high frequency of coexisting chlamydial and gonococcal infections, and increased recognition of the serious complications of chlamydial and gonococcal infections. In addition, new antimicrobials, in particular new cephalosporins, that may prove to be effective in treating gonococcal infection are becoming available in the United States. Therefore, these guidelines do not attempt to be a comprehensive list of all possible treatment regimens. Rather, they seek to provide guidance for regimens that meet general criteria of efficacy, safety, ease of administration, and cost.

Uncomplicated Infection in Adults

Recommended Regimens

(the order of presentation does *not* indicate preference)

Tetracycline HCl: 500 mg, by mouth, 4 times a day for 7 days (total dose 14.0 g). Other tetracyclines are not more effective than tetracycline HCl. All tetracyclines are ineffective as a single-dose therapy. Doxycycline hyclate 100 mg by mouth, twice a day for 7 days may be substituted for tetracycline.

Advantage

1. Effective against coexisting chlamydial infections

Disadvantages

1. Requires compliance with multiple doses
2. May encourage the emergence of tetracycline-resistant strains if the regimen is not strictly followed
3. Ineffective against anorectal gonococcal infections in men

OR

Amoxicillin/ampicillin: Amoxicillin, 3.0 g, or ampicillin, 3.5 g, either with 1.0 g probenecid by mouth

Advantage

1. Single-dose treatment

Disadvantages

1. Ineffective against chlamydial infections
2. Ineffective against anorectal and pharyngeal gonococcal infections

OR

Aqueous procaine penicillin G: 4.8 million units injected intramuscularly (IM) at 2 sites, with 1.0 g of probenecid by mouth

Advantage

1. Single-dose therapy

Disadvantages

1. Injection
2. Possible procaine reaction
3. Possible penicillin anaphylaxis
4. Ineffective against chlamydial infections

An important concern in the treatment of gonorrhea is coexisting chlamydial infection, which has been documented in up to 45% of gonorrhea patients for whom adequate chlamydial cultures are done. Patient compliance can also be a problem with multiple-day tetracycline/doxycycline regimens for gonococcal infections, as can the potential selection of tetracycline-resistant isolates when incomplete doses are taken. To address these concerns, a single-dose regimen could be administered just before the tetracycline/doxycycline regimen. On theoretical grounds, this combined regimen (outlined below) is very attractive, but its efficacy and side effects have not been evaluated. CDC intends to undertake such an evaluation and encourages others to do the same.

The combined regimen includes:

Amoxicillin/ampicillin: Amoxicillin 3.0 g or ampicillin 3.5 g, either with 1.0 g probenecid by mouth

PLUS

Tetracycline HCl: 500 mg, by mouth, 4 times a day for 7 days (total dose 14.0 g)

Doxycycline hyclate 100 mg, by mouth, twice a day for 7 days may be substituted for tetracycline HCl.

Advantages

1. Provides adequate single-dose treatment for gonorrhea
2. Effective against chlamydial infections

Disadvantage

1. Efficacy and side effects of this specific combined regimen have not been evaluated.

Special Note:

Tetracycline or aqueous procaine penicillin G (APPG) is the preferred therapy for pharyngeal gonococcal infection. Pharyngeal infection is not effectively treated by either the amoxicillin or ampicillin regimens.

A homosexual man with uncomplicated gonococcal infection should be treated with aqueous procaine penicillin G 4.8 million units, plus 1.0 g of probenecid. If he is allergic to penicillin, use spectinomycin 2.0 g, IM, in 1 injection. Both of these regimens provide adequate treatment for urethral and anorectal gonococcal infection. However, spectinomycin is ineffective in the treatment of pharyngeal gonococcal infection.

Other Considerations

Patients other than homosexual men who are allergic to penicillins or probenecid should be treated with oral tetracycline or doxycycline as above. Penicillin-allergic patients who cannot tolerate tetracyclines may be treated with spectinomycin HCl, 2.0 g, IM, in 1 injection.

Patients with incubating syphilis (seronegative without clinical signs of syphilis) are likely to be cured by all the above regimens except spectinomycin. All patients treated for gonorrhea should have a serologic test for syphilis.

Patients with gonorrhea who also have syphilis or are established contacts of syphilis patients should be given additional treatment appropriate to the stage of syphilis. (See Syphilis, p.50S.)

Treatment of Sexual Partners

Men and women exposed to gonorrhea should be examined, cultured, and treated at once with one of the regimens above.

Follow-Up

Follow-up cultures should be obtained from the infected site(s) 4-7 days after completion of treatment. In addition, cultures should be obtained from the rectum of all women who have been treated for gonorrhea.

Treatment Failures

The patient in whom gonorrhea persists after treatment with one of the non-spectinomycin regimens above should be treated with 2.0 g of spectinomycin IM. (See PENICILLINASE-PRODUCING *NEISSERIA GONORRHOEAE*) Recurrent gonococcal infections after treatment with the recommended schedules may be due to reinfection and indicate a need for improved contact tracing and patient education. Since PPNG infection is a cause of treatment failure, posttreatment isolates should be tested for penicillinase production.

Drugs Not Recommended

Although long-acting forms of penicillin (such as benzathine penicillin G) are effective in the treatment of syphilis, they have NO place in the treatment of gonorrhea. Oral penicillin preparations such as penicillin V are not recommended for the treatment of gonococcal infection.

Penicillinase-Producing *Neisseria gonorrhoeae*

Patients with proven PPNG infection or who are likely to have acquired gonorrhea in areas of high PPNG prevalence and their sexual partners should receive spectinomycin 2.0 g, IM, in a single injection. Tetracycline may be added to treat coexistent chlamydial infection. Patients with positive cultures after spectinomycin therapy should be treated with cefoxitin 2.0 g, IM, in a single injection plus probenecid 1.0 g, by mouth; OR cefotaxime 1.0 g, IM, in a single injection without probenecid. A daily single dose of 9 tablets of trimethoprim/sulfamethoxazole (80 mg/400 mg) for 5 days should be used to treat pharyngeal gonococcal infection due to PPNG. Spectinomycin and cefoxitin are ineffective in pharyngeal infections.

Gonococcal Infections in Pregnancy

All pregnant women should have endocervical cultures for gonococci as an integral part of the prenatal care at the time of the first visit. A second culture late in the third trimester should be obtained from women at high risk of gonococcal infection.

Drug regimens of choice are amoxicillin, or ampicillin, each with probenecid as described above. Women who are allergic to penicillin or probenecid should be treated with spectinomycin 2.0 g, IM. Erythromycin in the dosage recommended under chlamydial infection can be added to treat coexistent chlamydial infection.

Refer to the sections on acute salpingitis and disseminated gonococcal infections for the treatment of these conditions during pregnancy. Tetracycline should not be used in pregnant women because of potential adverse effects for the fetus.

Disseminated Gonococcal Infection

Treatment Schedules

Hospitalization is usually indicated, especially for those who cannot reliably comply with treatment, have uncertain diagnosis, or have purulent joint effusions or other complications.

There are several, acceptable treatment schedules for the gonococcal arthritis-dermatitis syndrome. These include the following:

Aqueous crystalline penicillin G: 10 million units, intravenously (IV), per day until improvement occurs, followed by amoxicillin 500 mg or ampicillin 500 mg, by mouth, 4 times a day to complete at least 7 days of antibiotic treatment

OR

Amoxicillin/ampicillin: amoxicillin 3.0 g or ampicillin 3.5 g, by mouth, each with probenecid 1.0 g, followed by amoxicillin 500 mg or ampicillin 500 mg, by mouth, 4 times a day for at least 7 days

OR

Tetracycline HCl: 500 mg, by mouth, 4 times a day for at least 7 days. Tetracycline HCl should not be used for complicated gonococcal infection in pregnant women.

OR

Cefoxitin/cefotaxime: cefoxitin 1.0 g or cefotaxime 500 mg, either given 4 times a day IV for at least 7 days (treatment of choice for disseminated infections caused by PPNG)

OR

Erythromycin: 500 mg, by mouth, 4 times a day for at least 7 days

Special Considerations

Open drainage of joints other than the hip is not indicated. Intraarticular injection of antibiotics is unnecessary.

Meningitis and Endocarditis

Meningitis and endocarditis caused by the gonococcus require high-dose IV penicillin therapy. Optimal duration of therapy is unknown, but most authorities treat patients for a month. Therapy of penicillin-allergic patients must be individualized.

Gonococcal Ophthalmia in Adults

Adults with gonococcal ophthalmia should be hospitalized and treated with aqueous crystalline penicillin G 10 million units, IV, daily for 5 days. For PPNG, use cefoxitin 1.0 g or cefotaxime 500 mg, IV, 4 times a day. Eyes should be irrigated immediately with saline or buffered ophthalmic solutions and then at least at hourly intervals as long as necessary to eliminate discharge. Cases must have careful ophthalmic follow-up to deal with ocular complications.

Infants Born to Mothers with Gonococcal Infection

The infant born to a mother with gonorrhea is at high risk of infection and requires treatment with a single injection of aqueous crystalline penicillin G: 50,000 units, IM or IV, for full-term infants or 20,000 units, IM or IV, for low-birth-weight infants. Topical prophylaxis for neonatal ophthalmia is not adequate treatment for infections at other sites. Clinical illness requires additional treatment.

Neonatal Gonococcal Infections

Gonococcal Ophthalmia

Neonates with gonococcal ophthalmia should be hospitalized and isolated for 24 hours after initiation of treatment. Untreated gonococcal ophthalmia is highly contagious and may rapidly lead to blindness. Aqueous crystalline penicillin G 50,000 units/kg/day, IV, in 2 doses should be administered for 7 days. Eyes should be irrigated immediately with saline or buffered ophthalmic solutions and then at least at hourly intervals as long as necessary to eliminate discharge. Topical antibiotic preparations alone are neither sufficient nor required when appropriate systemic antibiotic therapy is given. Both parents of newborns with gonococcal ophthalmia must be treated.

Penicillinase-Producing **Neisseria gonorrhoeae**

Neonates should be treated with cefotaxime or gentamicin in appropriate neonatal doses.

Complicated Infection

Neonates with arthritis and septicemia should be hospitalized and treated with aqueous crystalline penicillin G 75,000-100,000 units/kg/day, IV, in 4 divided doses for at least 7 days. Meningitis should be treated with aqueous crystalline penicillin G 100,000 units/kg/day, IV, divided into 3 or 4 doses and continued for at least 10 days

Gonococcal Infections of Older Children

(Please also see Child Abuse.)

Children who weigh 100 lbs (45 kg) or more should receive adult regimens. Children who weigh less than 100 lbs should be treated as follows.

Uncomplicated Disease

Uncomplicated vulvovaginitis and urethritis can be treated at 1 visit with amoxicillin 50 mg/kg plus probenecid 25 mg/kg (maximum 1.0 g), both given orally, OR with aqueous procaine penicillin G 100,000 units/kg, IM, plus probenecid, by mouth, 25 mg/kg (maximum 1.0 g). The latter regimen is recommended for proctitis and pharyngitis.

Penicillinase-Producing **Neisseria gonorrhoeae**

Children with infection due to PPNG should be treated with spectinomycin or cefotaxime in appropriate doses.

Special Considerations

Topical and/or systemic estrogen therapy are of no benefit in vulvovaginitis. Long-acting penicillins, such as benzathine penicillin G, are not effective. All patients should have follow-up cultures, and the source of infection should be identified, examined, and treated.

Allergy to Penicillins

Children who are allergic to penicillins should be treated with spectinomycin 40 mg/kg, IM. Children older than 8 years may be treated with tetracycline 40 mg/kg/day, by mouth, in 4 divided doses for 5 days. For treatment of complicated disease, the alternative regimens recommended for adults may be used in appropriate pediatric dosages.

Common STD-Associated Syndromes

Several, often serious, clinical syndromes are associated with STD. Some are more clearly defined than others. The following guidelines outline approaches to the initial treatment of these conditions *when complete bacteriologic evaluation is not possible* or while the physician awaits the results of specific laboratory tests.

Nongonococcal Urethritis

Urethritis not associated with *N. gonorrhoeae* is usually caused by *C. trachomatis* or *Ureaplasma urealyticum*. Nongonococcal urethritis (NGU) requires prompt antimicrobial treatment of the patient and evaluation and treatment of sexual partner(s).

Drug Regimens of Choice

Tetracycline HCl: 500 mg, by mouth, 4 times a day for at least 7 days

OR

Doxycycline: 100 mg, by mouth, twice a day for at least 7 days

Alternative Regimen

(for patients in whom tetracyclines are contraindicated or not tolerated)

Erythromycin: 500 mg, by mouth, 4 times a day for at least 7 days

Management of Sexual Partners

All persons who are sexual partners of patients with NGU should be examined for STD and promptly treated with one of the above regimens.

Follow-up

Patients should be advised to return if symptoms persist or recur.

Persistent or Recurrent NGU

Recurrent NGU may be due to failure to treat the sexual partner(s). Patients with persistent or recurrent objective signs of urethritis after adequate treatment of the patient and partner(s) warrant further evaluation for less common causes of urethritis.

Acute Pelvic Inflammatory Disease

(Endometritis, Salpingitis, Parametritis, and/or Peritonitis)

Acute pelvic inflammatory disease (PID) refers to the acute clinical syndrome attributed to the ascending spread of microorganisms, unrelated to pregnancy or surgery, from the vagina and endocervix to the endometrium, fallopian tubes, and/or contiguous structures.

Etiologic agents include *N. gonorrhoeae*, *C. trachomatis*, anaerobic bacteria (which include Bacteroides and gram-positive cocci), facultative gram-negative rods (such as *Escherichia coli*), *Actinomyces israelii*, and *Mycoplasma hominis*. In the individual patient it is often impossible to differentiate among these agents. Treatment regimens should be used that are active against the broadest range of these pathogens.

Hospitalization and Inpatient Treatment

Hospitalization of patients with acute PID should be strongly considered when: 1) the diagnosis is uncertain, 2) surgical emergencies such as appendicitis and ectopic pregnancy must be excluded, 3) a pelvic abscess is suspected, 4) severe illness precludes outpatient management, 5) the patient is pregnant, 6) the patient is unable to follow or tolerate an outpatient regimen, 7) the patient has failed to respond to outpatient therapy, or 8) clinical follow-up after 48-72 hours following the start of antibiotic treatment cannot be arranged. Many experts recommend that all patients with PID be hospitalized for treatment.

Rationale for Selection of Antimicrobials

The treatment of choice is not established. No single agent is active against the entire spectrum of pathogens. Several antimicrobial combinations do provide a broad spectrum of activity against the major pathogens in vitro, but many have not been adequately evaluated for clinical efficacy in PID.

Examples of Combination Regimens with Broad Activity against Major Pathogens in PID

Doxycycline: 100 mg, IV, twice a day

PLUS

Cefoxitin: 2.0 g, IV, 4 times a day

Continue drugs IV for at least 4 days and at least 48 hours after patient defervesces. Continue doxycycline 100 mg, by mouth, twice a day after discharge from the hospital to complete 10-14 days of therapy.

> **Comment**: This regimen provides optimal coverage for *N. gonorrhoeae*, including PPNG, and *C. trachomatis*. It may not provide optimal treatment for anaerobes, pelvic mass, or PID associated with an intrauterine device (IUD).

Clindamycin: 600 mg, IV, 4 times a day

PLUS

Gentamicin or tobramycin: 2.0 mg/kg, IV, followed by 1.5 mg/kg, IV, 3 times a day in patients with normal renal function

Continue drugs IV for at least 4 days and at least 48 hours after patient defervesces. Continue clindamycin 450 mg, by mouth, 4 times a day after discharge from the hospital to complete 10-14 days of therapy.

> **Comment**: This regimen provides optimal activity against anaerobes and facultative gram-negative rods, but may not provide optimal activity against *C. trachomatis* and *N. gonorrhoeae*.

Doxycycline: 100 mg, IV, twice a day

PLUS

Metronidazole: 1.0 g, IV, twice a day

Continue drugs IV for at least 4 days and at least 48 hours after patient defervesces. Then continue both drugs at same dosage orally to complete 10-14 days of therapy.

> **Comment**: Provides excellent coverage for anaerobes and *C. trachomatis*. Both drugs can be continued for oral therapy. Activity against some strains of *N. gonorrhoeae*, including PPNG, and some facultative gram-negative rods is not optimal.

Ambulatory Treatment

When the patient is not hospitalized, one of the following combination regimens is recommended:

Cefoxitin: 2.0 g, IM, OR **amoxicillin**: 3.0 g, by mouth, OR **ampicillin**: 3.5 g, by mouth, OR **aqueous procaine penicillin G**: 4.8 million units, IM, at 2 sites; each along with probenecid 1.0 g, by mouth

FOLLOWED BY

Doxycycline: 100 mg, by mouth, twice a day for 10-14 days

Tetracycline HCl 500 mg, by mouth, 4 times a day can also be used, but is less active against certain anaerobes and requires more frequent dosing; both represent drawbacks in treatment of PID.

> **Comment**: Cefoxitin or an equivalently effective cephalosporin plus doxycycline (or tetracycline) provides activity against *N. gonorrhoeae*, including PPNG, and *C. trachomatis*. PPNG-associated PID is not adequately treated with the combination of either amoxicillin, ampicillin, or aqueous procaine penicillin plus doxycycline.

Management of Sexual Partners

All persons who are sexual partners of patients with PID should be examined for STD and treated promptly with a regimen effective against uncomplicated gonococcal and chlamydial infection.

Follow-up

All patients treated as outpatients should be clinically reevaluated in 48-72 hours. Those not responding favorably should be hospitalized. For test of cure, a culture should be done as appropriate for pathogens initially isolated.

Intrauterine Device

The IUD is a risk factor for the development of PID. Although the exact effect of removing an IUD on the response of acute salpingitis to antimicrobial therapy and on the risk of recurrent salpingitis is unknown, removal of the IUD is recommended soon after antimicrobial therapy has been initiated. When an IUD is removed, contraceptive counseling is necessary.

Acute Epididymo-orchitis

Acute epididymo-orchitis has 2 forms: a sexually transmitted form usually associated with urethritis and commonly caused by *C. trachomatis* and/or *N. gonorrhoeae* and a non-sexually transmitted form associated with urinary tract infections caused by Enterobacteriaceae or *Pseudomonas*. Urine should be examined by Gram stain and culture to exclude bacteruria in all patients, including those with urethritis. Testicular torsion is a surgical emergency that should be considered in all cases.

Sexually Transmitted Epididymo-orchitis

Sexually transmitted epididymo-orchitis occurs in young adults and is associated with presence of urethritis, absence of underlying genitourinary pathology, and absence of gram-negative rods on Gram stain of urine.

Drug Regimens of Choice

Tetracycline HCl: 500 mg, by mouth, 4 times a day for at least 10 days

OR

Doxycycline: 100 mg, by mouth, twice a day for at least 10 days

Alternative Regimens

Alternative regimens have not been well studied. The following regimens can be considered in patients who cannot tolerate tetracycline:

Gonococcal urethritis and epididymitis:

Amoxicillin: 500 mg, by mouth, 3 times a day for at least 10 days
(For epididymitis caused by PPNG, clinical experience is limited, but a 10-day course of therapy with oral trimethoprim/sulfamethoxazole or parenteral cefotaxime, cefoxitin, or spectinomycin can be used.)

Nongonococcal urethritis and epididymitis:
Erythromycin: 500 mg, by mouth, 4 times a day for at least 10 days

Management of Sexual Partners

Sexual partners of patients with sexually transmitted acute epididymo-orchitis should be examined for STD and promptly treated with a regimen effective against uncomplicated gonococcal and chlamydial infection.

Adjuncts to Therapy

Bed rest and scrotal elevation until fever and local inflammation have subsided are recommended.

Follow-up

Failure to improve within 3 days requires reevaluation of diagnosis/therapy and consideration for hospitalization. Persistence of swelling for longer than 1 month should lead to evaluation for tumor.

Non-Sexually Transmitted Acute Epididymo-orchitis

Management includes prompt administration of broad-spectrum antimicrobial therapy. Choice of therapy is initially dictated by the severity of infection and later by results of urine culture and sensitivity tests. Evaluation for underlying urinary tract disease is indicated. Adjuncts to therapy and follow-up are the same as for sexually transmitted epididymo-orchitis.

Common STD Syndromes in Women

There are 3 common, yet less well defined, syndromes associated with STD in women. Clinicians are encouraged to familiarize themselves with these syndromes because they cause women a great deal of discomfort and may be associated with important pathogens.

Vaginal Discharge Associated with Gardnerella Vaginalis*

This syndrome consists of nonirritating, odoriferous, thin, grayish-white vaginal discharge; elevated vaginal pH (greater than 4.5); and the elaboration of malodorous amines from discharge fluid after alkalinization with KOH. Microscopic examination typically reveals the absence of gram-positive rods and the presence of small coccobacillary organisms associated with epithelial cells (so-called "clue cells"). It is now believed that gardnerellae act synergistically with anaerobic bacteria to produce the syndrome.

Treatment

The following treatment may be used:

Metronidazole: 500 mg, by mouth, twice a day for 7 days

Alternative Regimen

Ampicillin: 500 mg, by mouth, 4 times a day for 7 days is less effective but is suggested for pregnant patients or individuals for whom metronidazole is contraindicated.

Asymptomatic Carriers

Treatment is not recommended for asymptomatic carriers of *G. vaginalis.*

Management of Sexual Partners

Treatment of male sexual partners is controversial and may be indicated in specific instances of recurrence in the woman. Available data suggest that either metronidazole 500 mg, by mouth, twice a day for 7 days or ampicillin 500 mg, by mouth, 4 times a day for 7 days should be used.

Mucopurulent Cervicitis

The presence of mucopurulent endocervical exudate often reflects cervicitis due to chlamydial or gonococcal infection. Nongonococcal mucopurulent cervicitis responds to tetracycline therapy.

Treatment

1. If *N. gonorrhoeae* is found on Gram stain or culture of endocervical or urethral discharge, treatment should be given as recommended for uncomplicated gonorrhea in adults.
2. If chlamydial infection is proven or suspected, treatment should be given as recommended for chlamydial infection in adults.

Alternative Regimens

Alternate regimens have not been studied.

Management of Sexual Partners

Men exposed to women with mucopurulent cervicitis attributed to gonococcal or chlamydial infection should be evaluated for STD and treated as recommended for contacts exposed to gonorrhea or chlamydial infection.

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*Formerly called *Haemophilus vaginalis* or *Corynebacterium vaginale.*

Follow-up

Posttreatment cultures are indicated for any pathogen (e.g., *C. trachomatis; N. gonorrhoeae*) isolated before therapy.

Urethral Syndrome (Dysuria-Frequency Syndrome)

Women with dysuria, frequency, pyuria (10 leukocytes per 400 X field on microscopic examination of urinary sediment), and a *negative* Gram stain of unspun urine have the acute urethral syndrome and may be infected either with *C. trachomatis*, with *N. gonorrhoeae*, or with gram-negative bacilli present in quantities of 10^2-10^4/ml. Cultures of the urethra or urine are needed to clearly differentiate these agents in individual patients.

Dysuria, when not associated with frequency, may be due to either vaginitis or genital herpes simplex virus infection, and patients with dysuria alone should be evaluated for these infections, as well as those outlined above.

Treatment of patients with sexually transmitted urethral syndrome, management of their sexual partners, and their follow-up are as described above for mucopurulent cervicitis.

Trichomoniasis

Recommended Regimen

Metronidazole: 2.0 g, by mouth, in a single dose

Alternative Regimen

Metronidazole may be administered in a dosage of 250 mg, by mouth, 3 times a day for 7 days.

Asymptomatic Women

Asymptomatic women with trichomoniasis should be treated the same as symptomatic women.

Management of Sexual Partners

Male sexual partners of women with trichomoniasis should be treated with metronidazole 2.0 g, by mouth, in a single dose and examined for coexistent STD.

Follow-up

Tests of cure should be sought whenever possible. Resistance of *Trichomonas vaginalis* to metronidazole has been observed, but is rare.

Trichomoniasis in Pregnancy

Metronidazole is contraindicated in the first trimester of pregnancy and should be avoided throughout pregnancy. Clotrimazole 100 mg, intravaginally, at bedtime for 7 days may produce symptomatic improvement and some cures. Other local treatments may be used for symptomatic relief but have low cure rates. Lactating women may be treated with metronidazole 2.0 g, by mouth, in a single dose, but breast-feeding should be interrupted for at least 24 hours after therapy.

Neonatal Trichomonal Infections

Infants with symptomatic trichomoniasis or with persistent urogenital trichomonal colonization beyond the fourth week of life can be treated with metronidazole 10-30 mg/kg daily for 5-8 days.

Genital Herpes Simplex Virus Infections

Genital herpes infection is a viral disease that may be chronic and recurring and for which there is no known cure.

First Clinical Episode

A careful history should be obtained to establish that this is the patient's first disease episode.

Clinicians may elect to use:

Acyclovir ointment 5%: Apply sufficient quantity to adequately cover all lesions every 3 hours, 6 times a day for 7 days. Therapy should be initiated as early as possible following onset of signs and symptoms.

This treatment reduces viral shedding and the duration of disease in patients with primary initial infection who are treated within 6 days of the onset of symptoms; however, it does not prevent recurrences.

Acyclovir has not been tested in pregnant or lactating women.

Recurring Disease

There is no effective treatment to prevent recurrences of genital herpes infection or to shorten their duration.

Patients should be told about the natural history of genital herpes infection and advised to abstain from sexual contact while lesions are present. The risk of transmission of the herpes virus during asymptomatic periods is unknown. Some consultants recommend that asymptomatic patients use condoms, but their efficacy is unproved. Women with genital herpes infection should be advised to have yearly Pap tests. Early in pregnancy, women should inform their clinician of their history of genital herpes infection.

Ano-Genital Warts *(Condylomata acuminata)*

The treatment of ano-genital warts has not been well studied. No treatment is completely satisfactory. Ano-genital warts have recently been linked to the development of cancer. For these reasons, atypical or persistent warts should be biopsied. A Pap smear is recommended for all women with ano-genital warts. Women with cervical warts should not be treated until the result of the Pap smear is available to guide therapy. While podophyllin is widely used in the treatment of ano-genital warts, some consultants feel that cryotherapy, when available, may be preferable to podophyllin.

External Genital/Perianal Warts

Podophyllin: 10%-25% in compound tincture of benzoin. Apply carefully to wart, avoiding normal tissue. Wash off thoroughly in 1-4 hours. If the wart does not regress after 4 weekly applications, alternative treatments may be used.

Podophyllin should not be used during pregnancy.

Alternative therapies:

Cryotherapy (e.g., liquid nitrogen, solid carbon dioxide)
Electrosurgery
Surgical removal (scissor or curette)

Vaginal/Cervical Warts

Cervical warts: Most consultants recommend against the use of podophyllin for cervical warts.

Vaginal warts: May be treated with the regimen below:

Podophyllin: 10%-25% in compound tincture of benzoin, may be used for vaginal warts only if great care is taken to ensure that the treated area is dried before removing the speculum. Because podophyllin is absorbed and is toxic, use of large amounts should be avoided.

Alternative therapies:

Same as for external genital/perianal warts

Urethral/Meatal Warts

Accessible meatal warts: May be treated with the regimen below:

Podophyllin: 10%-25% in compound tincture of benzoin (see above). Great care should be taken to ensure that the treated area is dried before contact with normal mucosa is allowed.

Alternative therapies:

Same as for external genital/perianal warts

Urethral Warts: Intraurethral warts should be suspected in men with recurrent meatal warts. Urethroscopy is necessary to diagnose this condition. Intraurethral 5% 5-fluorouracil or thiotepa may be effective in this condition, but neither has been adequately evaluated. Podophyllin should not be used.

Anorectal Warts

Many consultants avoid the use of podophyllin for anorectal warts.

Podophyllin: 10%-25% in compound tincture of benzoin may be used to treat anorectal warts accessible by anoscope. Extreme care must be taken to avoid exposure of normal mucosa to podophyllin. Allow the treated area to dry before removal of the anoscope.

Alternative therapies:

Same as for external genital/perianal warts

Patients with extensive or proximal anorectal warts should be referred for proctologic evaluation.

Oral Warts

Oral warts should be treated with:

Cryotherapy (e.g., liquid nitrogen, solid carbon dioxide)
Electrosurgery
Surgical removal (scissor or curette)

Syphilis

Early Syphilis

Recommended Regimen

Early syphilis (primary, secondary, latent syphilis of less than 1 year's duration) should be treated with:

Benzathine penicillin G: 2.4 million units total, IM, at a single session

Pencillin-Allergic Patients

Patients who are allergic to penicillin should be treated with:

Tetracycline HCl: 500 mg, by mouth, 4 times a day for 15 days

Tetracycline appears to be effective, but has been evaluated less extensively than penicillin. Patient compliance with this regimen may be difficult, so care should be taken to encourage optimal compliance.

Penicillin-allergic patients who cannot tolerate tetracycline should have their allergy confirmed. For these patients there are 2 options:

1. If compliance and serologic follow-up can be assured, administer erythromycin 500 mg, by mouth, 4 times a day for 15 days.
2. If compliance and serologic follow-up cannot be assured, the patient should be managed in consultation with an expert.

Syphilis of More Than One Year's Duration

Recommended Regimen

Syphilis of more than 1 year's duration, except neurosyphilis (latent syphilis of indeterminate or more than 1 year's duration, cardiovascular, or late benign syphilis) should be treated with:

Benzathine penicillin G: 2.4 million units, IM, once a week for 3 successive weeks (7.2 million units total)

The optimal treatment schedules for syphilis of greater than 1 year's duration have been less well established than schedules for early syphilis. In general, syphilis of longer duration requires more prolonged therapy.

Therapy is recommended for established cardiovascular syphilis. Antibiotics may not reverse the pathology associated with this disease, however.

Pencillin-Allergic Patients

There are no published clinical data that adequately document the efficacy of drugs other than penicillin for syphilis of more than 1 year's duration. Cerebrospinal fluid examinations should be performed before therapy with these regimens.

Patients who are allergic to penicillin should be treated with:

Tetracycline HCl: 500 mg, by mouth, 4 times a day for 30 days. Patient compliance with this regimen may be difficult, so care should be taken to encourage optimal compliance.

Penicillin-allergic patients who cannot tolerate tetracycline should have their allergy confirmed. For these patients there are 2 options:

1. If compliance and serologic follow-up can be assured, administer erythromycin 500 mg, by mouth, 4 times a day for 30 days.
2. If compliance and serologic follow-up cannot be assured, the patient should be hospitalized and managed in consultation with an expert.

Cerebrospinal Fluid Examination

Cerebrospinal fluid (CSF) examination should be done for patients with clinical symptoms or signs consistent with neurosyphilis. This examination is also desirable for other patients with syphilis of greater than 1 year's duration to exclude asymptomatic neurosyphilis.

Neurosyphilis

Published studies show that a total dose of 6.0-9.0 million units of penicillin G over a 3- to 4-week period results in a satisfactory clinical response in approximately 90% of patients with neurosyphilis. This information must be considered along with the observation that regimens employing benzathine penicillin or procaine penicillin in doses under 2.4 million units daily do not consistently provide treponemicidal levels of penicillin in CSF, and with the knowledge that several case reports show the failure of such regimens to cure neurosyphilis.

Drug Regimens

Potentially effective regimens, none of which have been adequately studied, include:

Aqueous crystalline penicillin G: 12-24 million units, IV, per day (2-4 million units every 4 hours) for 10 days, followed by benzathine penicillin G, 2.4 million units, IM, weekly for 3 doses

OR

Aqueous procaine penicillin G: 2.4 million units, IM, daily plus probenecid 500 mg, by mouth, 4 times a day, both for 10 days, followed by benzathine penicillin G 2.4 million units, IM, weekly for 3 doses

OR

Benzathine penicillin G: 2.4 million units, IM, weekly for 3 doses

Penicillin-Allergic Patients

Patients with histories of allergy to penicillin should have their allergy confirmed and managed in consultation with an expert.

Syphilis in Pregnancy

Evaluation of Pregnant Women

All pregnant women should have a nontreponemal serologic test for syphilis, such as the VDRL or RPR test, at the time of the first prenatal visit. The treponemal tests such as the FTA-ABS test should not be used for routine screening. For women suspected of being at high risk for syphilis, a second nontreponemal test should be done during the third trimester, and the cord blood should be tested for syphilis antibody.

Seroreactive patients should be expeditiously evaluated. This evaluation should include a history and physical examination, as well as a quantitative nontreponemal test and a confirmatory treponemal test.

If the FTA-ABS test is nonreactive and there is no clinical evidence of syphilis, treatment may be withheld. Both the quantitative nontreponemal test and the confirmatory test should be repeated within 4 weeks. If there is clinical or serologic evidence of syphilis or if the diagnosis of syphilis cannot be excluded with reasonable certainty, the patient should be treated as outlined below.

Patients for whom there is documentation of adequate treatment for syphilis in the past need not be treated again unless there is clinical or serologic evidence of reinfection such as dark-field-positive lesions or a 4-fold rise in titer when a quantitative nontreponemal test is used.

Recommended Regimens

For patients at all stages of pregnancy who are not allergic to penicillin, penicillin should be used in dosage schedules appropriate for the stage of syphilis as recommended for the treatment of nonpregnant patients.

Penicillin-Allergic Patients

For patients at all stages of pregnancy who have documented allergy to penicillin:

1. If compliance and serologic follow-up can be assured, administer erythromycin in dosage schedules appropriate for the stage of syphilis as recommended for the treatment of nonpregnant patients. Infants born to mothers treated during pregnancy with erythromycin for early syphilis should be treated with penicillin.
2. If compliance and serologic follow-up cannot be assured, the patient should be hospitalized and managed in consultation with an expert.

Tetracycline is not recommended in pregnant women because of potential adverse effects on the fetus.

Follow-up

Pregnant women who have been treated for syphilis should have monthly quantitative nontreponemal serologic tests for the remainder of the current pregnancy. Women who show a 4-fold rise in titer should be treated again. After delivery, follow-up is as outlined for nonpregnant patients.

Congenital Syphilis

Congenital syphilis may occur if the mother has syphilis during pregnancy. If the mother has received adequate penicillin treatment during pregnancy, the risk to the infant is minimal. However, all infants should be examined carefully at birth and at frequent intervals thereafter until nontreponemal serologic tests are negative.

Infected infants are frequently asymptomatic at birth and may be seronegative if the maternal infection occurred late in gestation. Infants should be treated at birth if maternal treatment was inadequate, unknown, or with drugs other than penicillin, or if adequate follow-up of the infant cannot be ensured.

Infants with congenital syphilis should have a CSF examination before treatment.

Symptomatic Infants or Asymptomatic Infants with Abnormal Cerebrospinal Fluid

Aqueous crystalline penicillin G: 50,000 units/kg, IM or IV, daily in 2 divided doses for a minimum of 10 days

OR

Aqueous procaine penicillin G: 50,000 units/kg, IM, daily for a minimum of 10 days

Asymptomatic Infants with Normal Cerebrospinal Fluid

Benzathine penicillin G: 50,000 units/kg, IM, in a single dose

Although benzathine penicillin has been previously recommended and widely used, published clinical data on its efficacy in congenital neurosyphilis are lacking. If neurosyphilis cannot be excluded, the aqueous crystalline or procaine penicillin regimen is recommended. Only penicillin regimens are recommended for neonatal congenital syphilis.

After the neonatal period, penicillin therapy for congenital syphilis should be with the same dosages used for neonatal congenital syphilis. For larger children the total dose of penicillin need not exceed the dosage used in adult syphilis of more than 1 year's duration. After the neonatal period, the dosage of tetracycline for congenital syphilis in patients who are allergic to penicillin should be individualized but need not exceed dosages used in adult syphilis of more than one year's duration. Tetracycline should not be given to children less than 8 years of age.

Follow-up After Treatment and Re-Treatment

All patients with early syphilis and congenital syphilis should be encouraged to return for repeat quantitative nontreponemal tests at least 3, 6, and 12 months after treatment. For these patients quantitative nontreponemal tests will decline to nonreactive or to reactive with a low titer within a year following successful treatment with benzathine penicillin G. Titers decline more slowly with serologic tests for patients treated for disease of longer duration. Patients with syphilis of more than 1 year's duration should also have a repeat serologic test 24 months after treatment. Careful follow-up serologic testing is particularly important in patients treated with antibiotics other than penicillin. Examination of CSF should be planned as part of the last follow-up visit after treatment with alternative antibiotics.

All patients with neurosyphilis must be carefully followed with periodic serologic testing, clinical evaluation at 6-month intervals, and repeat CSF examinations for at least 3 years.

The possibility of reinfection should always be considered when patients with early syphilis need to be treated a second time. A CSF examination should be performed before re-treatment unless reinfection and a diagnosis of early syphilis can be established.

Re-treatment should be considered when:

1. Clinical signs or symptoms of syphilis persist or recur
2. There is a 4-fold increase in titer with a nontreponemal test
3. A nontreponemal test showing a high titer initially fails to show 4-fold decrease within a year

Patients should be re-treated according to the schedules recommended for syphilis of more than 1 year's duration. In general, a patient should be re-treated only once since patients may maintain stable, low titers when nontreponemal tests are used or may have irreversible anatomical damage.

Epidemiologic Treatment

Persons who have been exposed to infectious syphilis within the preceding 3 months and other persons who on epidemiologic grounds are at high risk for early syphilis should be treated as for early syphilis. Every effort should be made to determine if such persons have syphilis.

Haemophilus ducreyi Infection (Chancroid)

Chancroid may be a more common cause of genital ulcers than presently recognized. The diagnosis is best made by isolation of *Haemophilus ducreyi* from ulcers and/or fluctuant nodes on appropriate selective medium.

Drug Regimens

Erythromycin: 500 mg, by mouth, 4 times a day

OR

Trimethoprim/sulfamethoxazole: double-strength tablet (160/800 mg), by mouth, twice a day

Therapy should be continued for a minimum of 10 days and until ulcers and/or lymph nodes have healed.

Lesion Management

Fluctuant lymph nodes should be aspirated through healthy adjacent normal skin. Incision and drainage or excision of nodes will delay healing and are contraindicated.

Apply compresses to ulcers to remove necrotic material.

Sexual Partners

Treat sexual partners with a 10-day course of one of the above regimens.

Note: Antimicrobial susceptibility testing should be done on *H. ducreyi* isolated from patients who do not respond to the recommended therapies.

Lymphogranuloma venereum: Genital, Inguinal, or Anorectal

Infection with a lymphogranuloma venereum (LGV) serotype of *C. trachomatis* should be treated in the following way.

Drug Regimen of Choice

Tetracycline HCl: 500 mg, by mouth, 4 times a day for at least 2 weeks

Alternative Regimens

The following drugs are active against LGV serotypes *in vitro* but have not been evaluated extensively in culture-confirmed cases.

Doxycycline: 100 mg, by mouth, twice a day for at least 2 weeks

OR

Erythromycin: 500 mg, by mouth, 4 times a day for at least 2 weeks

OR

Sulfamethoxazole: 1.0 g, by mouth, twice a day for at least 2 weeks. Other sulfonamides can be used in equivalent dosage.

Lesion Management

Fluctuant lymph nodes should be aspirated as needed through healthy adjacent normal skin. Incision and drainage or excision of nodes will delay healing and are contraindicated.

Late sequelae such as stricture and/or fistula may require surgical intervention.

Scabies

Adults and Older Children

Treatment

Lindane (1%): 1 oz of lotion, or 30 g of cream applied thinly to all areas of the body from the neck down and washed off thoroughly after 8 hours. *Not recommended for pregnant or lactating women.*

Alternative Therapies

Crotamiton (10%): applied to the entire body from the neck down nightly for 2 nights and washed off thoroughly 24 hours after the second application

OR

Sulfur (6%) in petrolatum: applied to the entire body from the neck down nightly for 3 nights. Patients may bathe before reapplying the drug and should bathe 24 hours after the final application.

Infants, Young Children (< 10 Years Old), Pregnant and Lactating Women

Treat with one of the following:

Crotamiton (10%): as noted above

OR

Sulfur (6%): in petrolatum, as noted above

Contacts

Sexual contacts and close household contacts should be treated as above.

Special Considerations

Pruritus may persist for several weeks after adequate therapy. A single re-treatment after 1 week may be appropriate if there is no clinical improvement. Additional weekly treatments are warranted only if live mites can be demonstrated.

Clothing or bed linen that may have been contaminated by the patient within the past 2 days should be washed and/or dried by machine (hot cycle in each) or dry cleaned.

Pediculosis Pubis

Drug Regimens

Lindane (1%) lotion or cream: applied in a thin layer to the infested and adjacent hairy areas and thoroughly washed off after 8 hours; or **lindane (1%) shampoo**: applied for 4 minutes and then thoroughly washed off. *Not recommended for pregnant or lactating women.*

OR

Pyrethrins and piperonyl butoxide (nonprescription): applied to the infested and adjacent hairy area and washed off after 10 minutes.

Re-treatment is indicated after 7 days if lice are found or eggs are observed at the hair-skin junction. Clothing or bed linen that may have been contaminated by the patient within the past 2 days should be washed and/or dried by machine (hot cycle in each) or dry cleaned.

Contacts

Sexual contacts should be treated as above.

Special Considerations

Pediculosis of the eyelashes should be treated by the application of occlusive ophthalmic ointment to the eyelid margins twice daily for 10 days to smother lice and nits. Lindane or other drugs should not be applied to the eyes.

Enteric Infections

Treatment of proctitis and enterocolitis should be based on etiologic diagnosis. Appropriate gastroenterologic work up should be pursued in all cases. Asymptomatic, infected individuals for whom anal-oral contact is a sexual practice should be treated in accordance with recommendations for symptomatic individuals, as should persons whose work or social situation is associated with a likelihood of transmission (e.g., food handlers, hospital workers, day-care-center employees, etc.). Sexual partners at risk for fecal-oral transmission should be evaluated. Sexual transmission does not preclude the possibility of nonvenereal transmission as well. Careful attention to hand washing and other hygenic practices is strongly urged.

Campylobacter jejuni

The drug of choice for symptomatic enterocolitis or proctitis is:

Erythromycin: 500 mg, by mouth, 4 times a day for 7 days

Shigella Species

Antibiotic choice must be based on the sensitivity pattern of the isolate. Immediate treatment, when required, may be based on local sensitivity patterns. Current national sensitivity patterns suggest that the drug of choice is:

Trimethoprim/sulfamethoxazole: double-strength tablet (160/800 mg), by mouth, twice daily for 7 days

An alternative is ampicillin 500 mg, by mouth, 4 times a day for 7 days, although the variability of regional sensitivity of shigellae to ampicillin must be considered. Amoxicillin is *not* an acceptable substitute.

Nontyphoidal *Salmonella* Species

Treatment for asymptomatic carriage or uncomplicated symptomatic infection is not generally recommended. Sexual partners should be evaluated.

Amebiasis

Laboratory diagnosis may be complicated by prior use of antidiarrheal agents and antibiotics such as tetracycline or erythromycin.

Symptomatic Patients

In symptomatic patients the regimen of choice consists of a systemic drug plus a lumenal amebicide:

Metronidazole: 750 mg, by mouth, 3 times a day for 5-10 days

PLUS EITHER

Iodoquinol (diiodohydroxyquin): 650 mg, by mouth, 3 times a day for 20 days; OR **diloxanide furoate:** 500 mg, by mouth, 3 times a day for 10 days*

An alternative would be to use metronidazole alone followed sequentially by one of the lumenal amebicides if clinical cure is not achieved.

The regimen of second choice is:

Paromomycin: 25-30 mg/kg/day in 3 divided doses for 7 days.*

This drug is used alone. Although primarily a lumenal amebicide, it has been noted to have superficial tissue effect.

Severe disease or extraintestinal illness should prompt appropriate medical consultation and referral.

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*available through CDC.

Asymptomatic Cysts Passers

For asymptomatic passers of amebic cysts, the lumenal amebicides alone are sufficient (iodoquinol 650 mg, by mouth, 3 times a day for 20 days, or diloxanide furoate 500 mg, by mouth, 3 times a day for 10 days).

Giardiasis

The drug of choice for symptomatic and asymptomatic infection is:

Quinacrine: 100 mg, by mouth, 3 times a day for 7 days

An alternative therapy is:

Metronidazole: 250 mg, by mouth, 3 times a day for 7 days

In the case of coexistent symptomatic amebiasis and giardiasis, metronidazole in the higher dose may be preferred (see Amebiasis).

As with other protozoal pathogens, initial treatment of asymptomatic carriers is indicated. Re-treatment of recurrences, either from relapse or reinfection, depends on individual and epidemiologic circumstances.

> **Note**: Chlamydial and gonococcal rectal infections are discussed in the sections dealing with those organisms. Presently, there is no specific treatment for proctitis associated with herpes simplex virus infection.

Prevention of Ophthalmia Neonatorum

Neonatal prophylaxis may be directed against both gonococcal ophthalmia, a potentially blinding disease, and chlamydial conjunctivitis. Instillation of a prophylactic agent into the eyes of all newborn infants is recommended as required by law in most states.

Effective preventive treatment against both diseases is provided by either erythromycin (0.5%) ophthalmic ointment or tetracycline (1%) ointment given as a single application, *immediately* post partum, into each conjunctival sac with no rinsing of the eyes. Single-use tubes or ampules are preferable to multiple-use tubes.

These treatments do not affect the nasopharyngeal carriage of *C. trachomatis* and may not prevent subsequent lower respiratory tract infection.

Silver nitrate is effective prophylaxis for gonococcal ophthalmia, but will not prevent chlamydial ophthalmia. The efficacy of tetracycline and erythromycin in the prevention of PPNG ophthalmia is unknown. Bacitracin is not recommended.

Prevention of Special Maternal and Neonatal Infections

Herpes Simplex Virus

No antiviral therapy for herpes simplex virus (HSV) infection has been shown to be effective for pregnant patients. Well-designed studies comparing strategies for the prevention of perinatal HSV infections are unavailable. Since the optimal management is not known, physicians may choose to consult with the American College of Obstetrics and Gynecology and the American Academy of Pediatrics, which has made recommendations for surveillance and management of delivery in women at risk for HSV infection.

Cytomegalovirus

Treatment of infants with severe congenitally transmitted cytomegalovirus (CMV) disease with antiviral medications has been unsuccessful. No attempts have been made to treat cytomegalovirus infections of pregnant women, as most infections go unrecognized and antiviral drugs are potentially teratogenic.

The highest risk of congenital CMV infection or disease occurs with primary maternal infection. Although most primary maternal CMV infections are asymptomatic, a few will present with a mononucleosis-like syndrome. Therefore, if a pregnant patient develops symptoms suggesting mononucleosis, a heterophile test should be performed. If heterophile-negative mononucleosis is diagnosed, attempts should be made to confirm CMV infection by serologic or virologic means. Only a small proportion of primary infections will be so recognized. Recognition of primary CMV infection in pregnancy will permit physicians to inform patients about the risks of continuing the pregnancy.

Group B Streptococcal Disease

The present state of knowledge about the epidemiology of group B streptococcal disease is not sufficient to recommend routine treatment of pregnant women or their sexual partners or routine prophylaxis of the newborn.

STD and the Management of Rape Victims and Sexually Abused Children

These recommendations are limited to the management of sexually transmitted infections. Appropriate management of medical-legal aspects, potential pregnancy, and physical and psychological trauma are also an integral part of management.

There are no firm data with which to estimate the risk of a sexually assaulted person's contracting a sexually transmitted infection. Based on the prevalence of infections in the general population, the most likely diseases for which these patients are at risk appear to be chlamydial infections, gonorrhea, genital herpes, cytomegalovirus, and trichomoniasis. If the offender is at high risk for having syphilis and hepatitis B, the victim has an increased risk of acquiring these diseases.

Rape

Initial examination of the rape victim should include:

1. Cultures for *N. gonorrhoeae* from any potentially infected sites
2. If possible, cultures for *C. trachomatis* from any potentially infected sites
3. Examination of vaginal specimens for *T. vaginalis* by wet mount and, if available, by culture
4. A bimanual pelvic examination for women
5. A serologic test for syphilis
6. A sample of serum that is frozen and saved for future testing

The risk of infection after rape, while unknown, is thought to be low. If prophylaxis is to be administered because the physician feels it is indicated or because the patient requests it, the following should be used:

Tetracycline: 500 mg, by mouth, 4 times a day for at least 7 days

OR

Doxycycline: 100 mg, by mouth, twice a day for at least 7 days

Patients who are allergic to tetracycline and pregnant women should be treated with:

Amoxicillin/ampicillin: amoxicillin 3.0 g or ampicillin 3.5 g, each given with 1.0 g of probenecid as a single oral dose

Patients should be seen for medical follow-up in 7 days, and the aforementioned studies, except for the serologic test for syphilis, repeated. A serologic test for syphilis 6 weeks after the incident is important in cases of assault by individuals who are at high risk for syphilis.

Every effort should be made to establish whether the assailant is infected with an STD. Victims should receive treatment for exposure to an STD that is documented in the assailant.

Child Abuse

Any sexually transmitted infection in a child should be considered as evidence of sexual abuse until proven otherwise. Any child with a sexually transmitted infection, and any child or teenager who reports sexual abuse, should be reported to the appropriate authorities for investigation of possible sexual abuse. Sexually abused children are best managed by a team of professionals experienced in addressing their physical and psychological needs.

The risk of acquisition of a sexually transmitted infection by child victims of sexual assault or abuse is believed to be lower than for adult victims. Such children should be evaluated for STD pathogens as described under the guidelines for management of rape victims, but with particular sensitivity to clinical procedures that may be traumatic to them.

Treatment is indicated when disease is present. However, prophylactic treatment before diagnosis is usually not indicated unless there is evidence that the assailant is infected.

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